INDEPENDENT ORBITER ASSESSMENT

ASSESSMENT
OF THE
REACTION CONTROL
SYSTEM
Vol. 3 of 5

26 FEBRUARY 1988

ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: FRCS-11140X
NASA FMEA #: 05-6KF-2036-1

SUBSYSTEM: FRCS
MDAC ID: 11140
RJDF2A F3 MANIFOLD DRIVER SWITCH 6

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ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: FRCS-11141X NASA FMEA #: 05-6KF-2036-2 SUBSYSTEM: FRCS														ASA BASE		E [x]	
SUBSYSTI MDAC ID ITEM:				1	1141	A	F3	MA	NIFO	DLD	D.	RIVER	S	WITC	:H 6			
LEAD ANA	ALY	ST	:	D	. HA	RT.	MA:	N										
ASSESSMI	ENT	:																
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	. 1	HD	W/FU	JNC			A			В			С					
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COMPARE	[/N]		[N]	[N]	ſ	N]		ſ]	
RECOMMEN	[ADI	ric	ons:	i	(If	đi	if1	fer	ent	fro	om	NASA)						
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 05-6KF-	142X		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11142 RJDF2A	F3 MANIF	OLD DRIVE	R SWITCH 6	
LEAD ANALYST:	D. HART	TMAN			
ASSESSMENT:					
CRITICAL		REDUNDA	NCY SCREE	INS	CIL ITEM
FLIGH HDW/FU					
NASA [3 /1F IOA [3 /3	R]	[P] []	[] *		
COMPARE [/N	1	[N]	[]		
RECOMMENDATIONS	: (If	differen	t from NAS	SA)	
			[]	ן ז	[] ADD/DELETE)
* CIL RETENTION	RATIONA	LE: (If	applicabl	e) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONTA EFFECT.	INS MULI	TIPLE FAI	LURES. T	HIS FAILURE	ALONE HAS NO
AT MEETING WITH DISCUSSED. IT DUE TO DIFFEREN ISSUE REMAINS O	WAS AGRI IT INTERI	TEM MANAG EED UPON PRETATION	GER ON 1/2 THAT THE NS OF NSTS	0/88, NSTS ISSUE RAISE 22206. TH	22206 WAS D ABOVE WAS EREFORE, THE

ASSESSME												ASA D BASEL	INE]	
SUBSYSTE MDAC ID: ITEM:			11143		F3	MAN	IFO	LD	D	RIVER	sı	WITCH	6		-	
LEAD ANA	LYSI	r:	D. HA	RTI	AN	N										
ASSESSME	NT:															
	F	TICAL FLIGH W/FU	_			EDUNI	DAN		S	CREENS				CIL ITEM	Ī	
	ш	M/ FU	NC		A			В			С					
NASA IOA	[3	/1R /1R]	[P]	[[P]	[P]]		[] *]	
COMPARE	[/]	[N]	[N]	[N]		[]	
RECOMMENI	DATI	ons:	(If	di	ff	eren	nt f	rc	m	NASA)						
	[3	/3]	[]	[]	[]	(AD	[D/DE)
* CIL RET	TENT.	ION R	RATION	ALE	:	(If	app	li	.ca			EQUAT EQUAT		[]	
NASA FMEA	CO	NTAIN	S MULT	'IP	LE	FAI	LUR	ES	•	THIS	F	AILUR	E A	LONE	HAS	NO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

NASA DATA: ASSESSMENT DATE: 1/29/88
ASSESSMENT ID: FRCS-11144X
NASA FMEA #: 05-6KF-2036-1 ASSESSMENT DATE: 1/29/88 BASELINE [] NEW [X] FRCS SUBSYSTEM: 11144 RJDF2A F3 MANIFOLD DRIVER SWITCH 6 MDAC ID: ITEM: LEAD ANALYST: D. HARTMAN ASSESSMENT: CRITICALITY REDUNDANCY SCREENS \mathtt{CIL} ITEM FLIGHT A B C HDW/FUNC NASA [3/1R] [P] [P] [P] [] [X] IOA [2/1R] [P] [P] [X] COMPARE [N /] [] [] [N] RECOMMENDATIONS: (If different from NASA) [2/1R] [P] [P] [A]
(ADD/DELETE) * CIL RETENTION RATIONALE: (If applicable) ADEQUATE [INADEQUATE

LOSE CAPABILITY TO EXPEL PROPELLANTS TO MEET CG LIMITS.

ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF THRUSTERS.

ASSESSM	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: FRCS-11145X NASA FMEA #: 05-6KF-2035- SUBSYSTEM: FRCS								1							ASA D BASEL	IN		×	[[]	
SUBSYST MDAC ID ITEM:				1:	L145	F	'4	/F5	MA	NI	F	OL	D LO	GI	:c	SWIT	СН	12			
LEAD AND	ALY	ST	:	D.	HAR	TM	Α	N													
ASSESSMI	ENT	:																			
	CR		ICAL LIGH		?		R	EDU	NDAI	NC	Y	so	CREE	NS	;				ΙL		
	•	HD	W/FU	NC			A				В				С			1.	ΓE	M	
NASA IOA	[3 2	/1R /1R]		[]	P P]	[•	P P]		[P P]]	х]	*
COMPARE	[N	/]	i	[]	(]	ł	[]		[N]	
RECOMMEN	DA'	ric	ONS:		(If o	li	Ef	ere	ent	f	ro	m	nas <i>i</i>	۱)							
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REMARKS:	REN	CF	ES.													- z		L		1	

ASSESSMEN ASSESSMEN NASA FMEA	T ID:	Ξ:	1/29/8 FRCS-1 05-6K	r + r	46 03	X 5-2	2			·		SA DA]
SUBSYSTEM MDAC ID:	i :		FRCS 11146 RJDF2	A F	4/	'F5	MANI	FC	LD	LOGI	C	SWIT	CH 1	L2	
LEAD ANAI	LYST:		D. HA	RT!	IAN	ſ									
ASSESSMEN	NT:														
CRITICALITY REDUNDANCY SCREENS FLIGHT													CIL ITE	м	
	HDW/				A			В			С				
NASA IOA	[3 /	'1R '3	1	[P]]	P]	[P]		[] *]
COMPARE	[/	'N]	[N]	[N	}	[N]		[]
RECOMMEN	DATIO	1S:	(I	đ	if	feı	rent	fr	om	NASA)				
	[3 ,	/3	3	[]	[]	[1	(2	[\DD/E] ELETE)
* CIL RE	(ADD/DELETE) * CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []														
REMARKS:	LURE	ΑL	ONE HA	s ì	10	EF	FECT.	•							

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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FRCS 11147 RJDF2A	F4/F5 1	MANIF	OLD 1	LOGIC SWITCH	I 12
D. HARTI	MAN				
ŗ	REDUNI	DANCY	SCRE	ENS	CIL ITEM
IC	A	В		С	TIEM
] [P]	[P]	[P] []	[] *
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(If di	fferen	it fro	om NA	SA)	
] []	[]	[] (2	[] ADD/DELETE)
			cabl		[]
ID: 11147			PATIONALE: (If appli	PATIONALE: (If applicable	FRCS 11147 RJDF2A F4/F5 MANIFOLD LOGIC SWITCH D. HARTMAN ITY REDUNDANCY SCREENS TO A B C [P] [P] [P] [

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 05-6KF-	1482	X 5 − 2				SA DATA: ASELINE NEW]			
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11148 RJDF2A	F4/	F5 MA	NIFO	LD LO	GIC	SWITCH :	12				
LEAD ANALYST:	D. HART	rman										
ASSESSMENT:												
CRITICALITY REDUNDANCY SCREENS CIL ITEM												
FLIGH HDW/FU		A		В		С			-			
NASA [3 /1F IOA [3 /1F	R]	[P]	[P]	[P]	[] *			
COMPARE [/	1	[]	[]	[]	[]			
RECOMMENDATIONS	: (If	dif	feren	t fr	om NAS	5 A)						
[3 /3	1	[]	[1	[] (2	[ADD/D] ELETE)			
* CIL RETENTION	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
REMARKS: THIS FAILURE AL	ONE HAS	ио	EFFEC	T.								

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: FRCS-11149X NASA FMEA #: 05-6KF-2035-								-1					ASA D BASEL	INE) x]		
SUBSYST MDAC ID ITEM:				11	RCS L149 TDF2	A	F4	/F5	5 MA	NIF	'OLD) LOG	IC	SWIT	СН	12		
LEAD AN	ALY	ST	:	D.	HAI	RT	MA	N										
ASSESSMI	ENT	:																
	CR		ICAL LIGH		?		R	EDU	NDAI	1CY	sc	REEN	s			CI		
]	HDI	W/FU	NC						В			С			IT	:M	
NASA IOA	[3 3	/1R /1R]		[P P]	[P]	[P P]		[]	*
COMPARE	[/]		[]	[•]	[]		[J	
RECOMMEN	[ADI	CIC	ons:		(If	di	fí	er	ent	fr	om 1	NASA))					
	[/]		[]	[J	[]	(AI	[DD/[TE)
* CIL RE	TEN	ΤI	ON F	LAT:	IONA	LE	:	(I:	f ap	pli	cak	ole)						
REMARKS:												IN	AD IAD	EQUAT EQUAT	E	[]	
NO DIFFE	REN	CE	s.													-	•	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11150 05-6KF-203	X 6-1		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11150 RJDF2A F4/	F5 MANI	FOLD DR	IVER SWITCH	13
LEAD ANALYST:	D. HARTMAN	Ī			
ASSESSMENT:					
CRITICAL		DUNDANG	CY SCREE	ens	CIL ITEM
FLIGH HDW/FU			В	С	
NASA [3 /1F IOA [2 /1F	1 [P] [P] P]	[P] [P]	[
COMPARE [N /] [] [1	[j	[и]
RECOMMENDATIONS	: (If dif	ferent	from NA	SA)	
[2 /1	R] [P] [P]	[P]	[A] ADD/DELETE)
* CIL RETENTION	RATIONALE:	(If ap	plicabl	e) ADEQUATE INADEQUATE	[]
REMARKS: LOSS OF ALL RED TO MEET CG LIMI	UNDANT JETS TS.	CAUSES	S INABIL	ITY TO EXPE	L PROPELLANTS

ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF THRUSTERS.

ASSESSMI ASSESSMI NASA FMI	ENT	ID:	151 203	LX 86-2	2					ASA DA BASELI N	NE [] K]			
SUBSYSTI MDAC ID: ITEM:			FRCS 11151 RJDF2		F4/	'F5	Man:	ΙF	OLD	DRI	VEF	SWIT	CH 13	-	
LEAD ANA	LYS	T:	D. HA	RTI	1AN	ſ									
ASSESSME	ENT:														
	•	TICAL FLIGH DW/FUI	r			DUN	IDANG		SCI	REEN			CII	_	
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IOA	[:	3 /1R 3 /3]	[P]	[P]]	P]]	[[] *	t
COMPARE	[/N]	[N]	[N] ,	[N]	[]	
RECOMMEN	DAT	IONS:	(If	di	ffe	ere	nt f	ro	m N	(ASA					
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMENT ASSESSMENT NASA FMEA	r ID:	1/29/83 FRCS-1 05-6KF	TTDZ	X 6-2				ASA DAT BASELII NI	NE	x j]		
SUBSYSTEM: MDAC ID: ITEM:	•	FRCS 11152 RJDF2A	F4/	'F5 MA	NIFC	LD	DRIVE	R SWIT	СН	13			
LEAD ANAL	YST:	D. HAR	(AMT	Ī									
ASSESSMEN	T:												
С	RITICAL		RI	EDUND	ANCY	SC	REENS			CIL	M		
	FLIGH HDW/FU		A		В		C	;					
NASA IOA	[3 /1H [3 /3	R]	[P]	[P]	[])		[]	*	
COMPARE	[/и	3	[N	1	[N]	[]	1]		[]		
RECOMMENI	DATIONS	: (If	dif	feren	t fr	om	nasa)						
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* CIL RE	TENTION	RATION	ALE:	(If	appl	ica		ADEQUA' ADEQUA'		[]		
REMARKS: NASA FME EFFECT.	A CONTA	INS MUI	TIPI	LE FA	LURI	ES.	THIS	FAILU	RE	ALOI	NE	HAS	ИО

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMENT ASSESSMENT NASA FMEA	ri	ATE:	FRCS-	111							SA DA ASELI N] X]	
SUBSYSTEM: MDAC ID: ITEM:	}		FRCS 11153 RJDF2	A F	4/F5	MAN:	I F	OLD	DRIV	ER	SWIT	CH 13	-	
LEAD ANALY	ST:		D. HAI	RTM	AN									
ASSESSMENT	':													
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	HDW	/FUN	C	1	Ą		В		(С		ITE	M	
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COMPARE [,	/]	[]	[]	[]		[]	
RECOMMENDA	rio:	NS:	(If	dif	fere	ent f	ro	m N	IASA)					
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* CIL RETEN	TIC	ON RA	ATIONA	LE:	(If	app	li	cab	le)					
REMARKS:											UATE UATE]	
NASA FMEA C EFFECT.	rno	'AINS	MULT:	IPL	E FA	ILUR	ES.	•	THIS	FAI	LURE	ALONI	Е НА	s no

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11154X 05-6KF-2036	Κ 5−1	NASA DATA: BASELINE NEW										
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11154 RJDF2A F4/1	F5 MANIFOLD [RIVER SWITCH	13									
LEAD ANALYST:	D. HARTMAN												
ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL ITEM													
CRITICALITY REDUNDANCE SCREENS ITEM													
NASA [3 /1F IOA [2 /1F	[] * [X]												
COMPARE [N /] [] []	[]	[N]									
RECOMMENDATIONS	: (If diff	ferent from N	ASA)										
] [P]	[P]	[A] ADD/DELETE)									
* CIL RETENTION	RATIONALE:	(If applicat	ole) ADEQUATE INADEQUATE	[]									
REMARKS: LOSS OF ALL RED TO MEET CG LIMI	UNDANT JETS	CAUSES INAB	LITY TO EXPE	L PROPELLANTS									

THRUSTERS.

ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF

ASSESSM ASSESSM NASA FM	ENT	ID:	FRC	9/88 S-111! 6KF-2	55X 041-	1			NASA BASI	ELIN]	
SUBSYSTIMDAC ID			FRC 111 RJD	55	5/F5 _/	/R5 M	ANIFO	OLD D	RIVEF	R SWI	[TCI	H 1	.5	
LEAD AND	ALYS!	r:	D. 1	HARTM	N.									
ASSESSMI	ENT:													
		ricai Fligh	LITY	F	EDUI	NDANC	scr	REENS			C]			
		OW/FU		A		E	3	(C		1.1	rem		
NASA IOA	[2	2 /2]	[]	[]]]		[X X]	*
COMPARE	[/]	[]	ĺ]	[3		[]	
RECOMMEN	DATI	ons:	(I	f dif	fere	ent fr	om N	ASA)						
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* CIL RE	TENT	ON :	RATIO	NALE:	(If	appl	icab	A	DEQU		[)	
REMARKS: NO DIFFE	RENC	ES.						INA	DEQUA	ATE	Ĺ	j	Ì	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	TDCC_11	IIDAX		NASA DATA: BASELINE NEW									
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11156 RJDF2B	L5/F5/R5	MANIFOLI	D DRIVER SWIT	ICH 15								
LEAD ANALYST:	D. HAR	TMAN											
ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT FLIGHT FUNC A B C													
FLIGHT HDW/FUNC A B C													
NASA [3 /2F IOA [3 /3	R]	[P] []	[P] []	[P] []	[] *								
RECOMMENDATIONS	(If	differen	t from NA	(SA)									
[3 /3	1	[]	[]	[]	[] ADD/DELETE)								
* CIL RETENTION	RATIONA	ALE: (If	applicabl	le) ADEQUATE INADEQUATE									
REMARKS: NASA FMEA CONTA EFFECT.	INS MUL	TIPLE FAI	LURES. '	THIS FAILURE	ALONE HAS NO								
DUE TO DIFFEREN	SUBSYS' WAS AGR	TEM MANAG EED UPON PRETATION	EER ON 1/1 THAT THE NS OF NST	20/88, NSTS ISSUE RAISE S 22206. TH	22206 WAS D ABOVE WAS EREFORE, THE								

ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT I):	1/29/8 FRCS-3 05-6K	11	15 20	7X 41-2						ASA D BASEI	INE	: [[x]	
SUBSYST MDAC ID ITEM:			FRCS 11157 RJDF21	3 1	L 5,	/F5/R5	5 1	MA	NI	FOLD :	DR	IVER	swii	гсн 1	L 5	
LEAD AN	ALYST:		D. HAI	(T	(A)	1										
ASSESSMI	ENT:															
	CRITI FL	CALI IGHT			RE	EDUNDA	M	CY	sc	CREENS	5			CIL	_	
		/FUN			A			В			С			ITEM	<u>[</u>	
NASA IOA	[3]	/2R /3]]	[P]]	P]	[P]		[] *	
COMPARE	[,	/N]]	[N]	[N]	ί	N]		[]	
RECOMMEN	IDATIO	Ns:	(If	di	ff	erent	f	rc	m	NASA)						
	[3 /	/3]	[]	[]	[]	(AD	[D/DE] LET:	E)
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REMARKS: NASA FME EFFECT.		TAINS	MULT:	IP:	LE	FAIL	UR	ES	•			AILUR		LONE	J HAS	S NO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 05-6KF-	1158	X 1-2					ASA D BASEL	INE	[[]		
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11158 RJDF2B	L5/	F5/R5	MA	NI	FOLD	DR:	IVER	SWIT	CH 1	5		
LEAD ANALYST:	D. HAR	MAMT											
ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL ITEM													
FLIGHT HDW/FUNC A B C													
]	*	
COMPARE [/N	1	[И]	[1	1]	[N]		[]		
RECOMMENDATIONS:	(If	difi	ferent	: f :	ro	m NAS	A)						
[3 /3]	[1	[1	[]	(A)	[DD/D:] ELI	ETE)	
* CIL RETENTION	RATIONA	ALE:	(If a	app	li	.cable	~	ADEQU ADEQU		[]		
REMARKS: NASA FMEA CONTA EFFECT.	INS MUL	ripL	E FAI	LUR	ES	5. TH	IS	FAIL	URE	ALON	E :	HAS NO	

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE RAISED ABOVE WAS DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THE ISSUE REMAINS OPEN.

ASSESSMI NASA FMI	ENT	ID:	FRCS-	-1115	59X 041-1	L			NASA DA BASELI		x]]
SUBSYSTI MDAC ID: ITEM:			FRCS 11159 RJDF2		5/ F 5/	'R5 MA	NIFO	LD D	RIVER S	SWITC	H 15	5
LEAD ANA	LY	ST:	D. HA	RTMA	N							
ASSESSME	ENT	:										
	CR:	ITICAL		R	EDUN	DANCY	SCR	EENS		C:	IL	
	1	FLIGH' HDW/FU		A	<u>.</u>	В		(С	ľ	rem	
NASA IOA	[2 /2 2 /2]	[[]	[]	[]]	х ј х ј	*
COMPARE	[/]	[]	[]	ĺ	3	[]	
RECOMMEN	DAT	rions:	(If	dif	fere	nt fr	om Na	ASA)				
	[/]	[]	[]	[[(ADD/	DEL.	ETE ;
* CIL RE	TEN	TION F	RATION	ALE:	(If	appl	icab]	P	DEQUAT	E []	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 05-6KF-	TPO	X 7 - 1			ì	NASA DA' BASELII N	NE [x]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11160 MANIFOL	,D 1	, JET	S HE	ATER	CO	NTROL S	WITCH	14
LEAD ANALYST:	D. HART	MAN							
ASSESSMENT:									
CRITICAL		RE	DUNDA	NCY	SCREE	NS		CI	L EM
FLIGH HDW/FU		A		В			С		
NASA [3 /2F IOA [3 /2F	R] [[P]	[P]	[P] P]]] *
COMPARE [/]	[]	[1	[]	[]
RECOMMENDATIONS	: (If o	diff	ferent	t fr	om NAS	SA)			
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LEAD ANALYST:	D. HARTI	MAN											
ASSESSMENT: REDUNDANCY SCREENS CIL													
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NO DIFFERENCES.

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NO DIFFERENCES.

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LEAD ANA	LYST:	D. HARTM	IAN			
ASSESSMEN	NT:					
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LEAD ANA	LYST	:	D. H	IARTMAN	Ī								
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SUBSYSTEM MANAGER STATED THAT THE RJDS WERE PART OF THE GN&C ANALYSIS. IOA RECOMMENDS A REFERENCE TO THE GN&C FMEAS BE MADE IN THE RCS EPD&C FMEAS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-1120 NONE	0X		nasa da Baseli N]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11200 JET DRIVE	R (VERNIE	R-ALL)			
LEAD ANALYST:	D. HARTMA	N				
ASSESSMENT:						
CRITICAL		REDUNDANC'S	SCREE	ns	CII	
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REMARKS: JET DRIVER FMEA INTO A FMEA.	HAS BEEN	DELETED.	IOA R	ECOMMENDS	THEIR	INCLUSION
SUBSYSTEM MANAG ANALYSIS. IOA	ER STATED RECOMMENDS	THAT THE	RJDS W	ERE PART THE GN&C	OF THE	GN&C BE MADE

REPORT DATE 2/26/88

IN THE RCS EPD&C FMEAS.

ASSESSM ASSESSM NASA FM	IENT	ID:	FRC: NON:	S-112	01X					DATA LINE NEW	[]	
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SUBSYSTEM MANAGER STATED THAT THE RJDS WERE PART OF THE GN&C ANALYSIS. IOA RECOMMENDS A REFERENCE TO THE GN&C FMEAS BE MADE IN THE RCS EPD&C FMEAS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	FRCS-112 NONE	202X		NASA DATA: BASELINE NEW	[]
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LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICA FLIG		REDUNDA	NCY SCREE	ns	CIL ITEM
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COMPARE [N /N	_		[N]	[N]	[N]
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SUBSYSTEM MANA HELIUM TANK IS RECOMMENDS THE	AT AMTAN V	MALVE ASS	CWDDII.	01/ 00	T OF THE NESS, IOA

ASSESSMENT ASSESSMENT NASA FMEA	r ID:	1/29/ FRCS- NONE		3 X			1	NASA D BASEL		[]
SUBSYSTEM: MDAC ID: ITEM:	!	FRCS 11203 DIODE									
LEAD ANALY	ST:	D. HAF	RTMAI	N							
ASSESSMENT	: :										
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SUBSYSTEM MANAGER STATED THAT THE DIODES WERE PART OF THE HELIUM ISOLATION VALVE ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THEY BE INCORPORATED INTO A FMEA.

ASSESSMENT DA ASSESSMENT II NASA FMEA #:):	1/29/88 FRCS-1: NONE	3 1204	X					SA DATA: ASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:		FRCS 11204 MICROS	WITC	Н							
LEAD ANALYST	:	D. HAR	TMAN								
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SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE HELIUM TANK ISOLATION VALVE ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSME NASA FME	NT ID:	1/29/88 FRCS-11 NONE	3 L205X		NASA DA BASELI N	
SUBSYSTER MDAC ID: ITEM:	1 :	FRCS 11205 MICROSW	Л ІТСН			
LEAD ANAI	LYST:	D. HART	'MAN			
ASSESSMEN	IT:					
c	RITICALI FLIGHT		REDUND	ANCY SCR	REENS	CIL
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NASA IOA	[/ [3 /1R] [p]	[] [P]	[] [P]	[] *
COMPARE	[N /N] [N]	[N]	[N]	[]
RECOMMEND	ATIONS:	(If d	ifferen	t from N	ASA)	
	[2 /1R		P]			[A] ADD/DELETE
* CIL RET	ENTION R	ATIONALE	E: (If a	applicab		
REMARKS:					ADEQUATE INADEQUATE	į į
MICROSWITO INCLUSION	CHES NOT INTO A E	ADDRESS MEA.	ED BY A	FMEA.	IOA RECOMMEN	NDS THEIR

SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE TANK ISOLATION VALVE 1/2 ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 NONE	206X		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11206 MICROSV	VITCH			
LEAD ANALYST:	D. HAR	MAN			
ASSESSMENT:					
CRITICAL		REDUND	ANCY SCRE	ENS	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [/ IOA [3 /1F]	[] [P]	[] [P]	[] [P]	[] *
COMPARE [N /N]	[N]	[N]	[и]	[]
RECOMMENDATIONS	(If	differen	t from NA	SA)	
[2 /1]	R]	[P]	[P]	[P]	[A] ADD/DELETE)
* CIL RETENTION	RATIONA	ALE: (If	applicabl	.e) ADEQUATE INADEQUATE	
REMARKS: MICROSWITCHES NOTINGLUSION INTO	OT ADDRI A FMEA.	ESSED BY	A FMEA.	IOA RECOMME	NDS THEIR

SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE TANK ISOLATION VALVE 3/4/5 ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSM ASSESSM NASA FM	ENT	.]	D:	1/29, FRCS NONE	/88 -11	20)7X						N		DAT: ELINI NEV]
SUBSYST MDAC ID ITEM:				FRCS 11207 MICRO		ΊΤ	'CH										·	
LEAD AN	ALY	ST	:	D. H2	RT	MA	N											
ASSESSMI	ENT	:																
	CR	IT	ICAL LIGH	ITY		R	EDU	NDAI	1C.	Y	SC	REEN	s			C]	ΙL	
	:			NC		A			1	В			С			IJ	EM	
NASA IOA	[3	/ /2R]	[P]	[P]	[P]]]	*
COMPARE			/N]		ì				N			[]	
RECOMMEN	IDA'	ric	ONS:	(If	d:	ifi	fer	ent	fı	0:	m 1	NASA))					
	[3	/2R]	[P]	[F	?)	[P]	(A)	[DD/	DELI	ETE :
* CIL RE	TEN	T]	ON R	RATION	ALE	E :	(I:	f ap	pl	i	cak	ole)	ΑĽ	EQU	ATE	[1	
REMARKS:															ATE	[-	
MICROSWI INCLUSIO	TCH N I	IES NI	TON S	ADDRI	ESS	EC) B:	Y A :	FM	ŒΖ	Α.	IOA	R	ECO	MENI	os '	THE:	[R

SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE MANIFOLD ISOLATION VALVE 1-4 ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSMEN ASSESSMEN NASA FMEA	T	ΙD	:	1/29 FRCS NONE	3-112	80	x					!			DATA LINI NE	E	-]	
SUBSYSTEM MDAC ID: ITEM:	:			FRCS 1120 MICE		ſΤC	Н												
LEAD ANAI	ΥS	T:		D. I	HART	AAN	Ī												
ASSESSMEN	T:																		
C	RI		CAL			RF	EDU	1DAN	CY	S	CRE	ENS	3				CI		
	H		JIGH I/FUI			A			В	i			С						
NASA IOA	[3	/ /2R]]	P]	[P	, :]	[P]			[]	*
COMPARE	[N	/N]	[N	1	!	N	1]	(N]			[]	
RECOMMEN	DA:	rIC	ONS:	(If d	if	fer	ent	fr	0	m NA	SA)						
	[3	/2R	.]	[P	1		[I	•)	[P]		(A	[DD/	DEL.	ETE)
* CIL RE	TE	NT:	ION	RATI	ONAI	Æ:	(I	f a	[qq	li	cabl				TAU TAU		[]	
REMARKS: MICROSWI INCLUSIO	TC N	HE IN	S NO	T AI A FMI	DDRES	SSE	D E	SY A	F	ΜE	A.	10	A :	REC	COMM	EN	DS	THE	IR

SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE MANIFOLD ISOLATION VALVE 1-4 ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	FRCS-1	8 1209X		NASA D BASEL		
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11209 MICROS	WITCH				
LEAD ANALYST:	D. HAR	TMAN				
ASSESSMENT:						
CRITICA) FLIG		REDUN	DANCY SCR	EENS	CIL	
HDW/F		A	В	С	ITEM	
NASA [/ IOA [3 /2]]	[] P]	[] [P]	[] [P]	[]	*
COMPARE [N /N] [N]	[и]	[и]	[]	
RECOMMENDATIONS:	(If d	liffere	nt from N	ASA)		
[3 /2R] [Pj	[P]	[P]	[]	ETE)
* CIL RETENTION	RATIONAL	E: (If	applicabl			
REMARKS:				ADEQUAT INADEQUAT		
MICROSWITCHES NO INCLUSION INTO A	r addres fmea.	SED BY	A FMEA.	IOA RECOMM	ENDS THEI	:R

SUBSYSTEM MANAGER STATED THAT THE MICROSWITCH WAS PART OF THE MANIFOLD ISOLATION VALVE 1-4 ASSEMBLY. FOR COMPLETENESS, IOA RECOMMENDS THIS FAILURE BE INCORPORATED INTO A FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-112 NONE	210X		NASA DATA BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11210 MICROSWI	ITCH				
LEAD ANALYST:	D. HART	MAN				
ASSESSMENT:						
CRITICAL		REDUNDA	NCY SCRE	ens	CIL ITE	
FLIGH HDW/FU		A	В	С		
NASA [/ IOA [3 /21] [R] [] P]	[] [P]	[] [P]	[] *
COMPARE [N /N] [[и]	[N]	[N]	[]
RECOMMENDATIONS	: (If o	differen	t from NA	ASA)		
[3 /2	R]	[P]	[P]	[P]	ADD/I) DELETE)
* CIL RETENTION	RATIONA	LE: (If	applicabl	le) ADEQUATE INADEQUATE]
REMARKS: MICROSWITCHES N INCLUSION INTO	OT ADDRE A FMEA.	SSED BY	A FMEA.	IOA RECOMMI	ends '	THEIR
SUBSYSTEM MANAG MANIFOLD ISOLA' RECOMMENDS THIS	GER STATE TION VALV S FAILURE	ED THAT T VE 1-4 AS E BE INCO	THE MICRO SSEMBLY. ORPORATED	SWITCH WAS FOR COMPLES INTO A FME	PART TENES A.	OF THE S, IOA

ASSESSM ASSESSM NASA FM	ient Ient Iea	r : r :	DATE [D:	: : :	1/29/ FRCS- 05-61	/88 -11 (F-	3 121 -22	L1X 252-	3				1		SA DA SEL:		[x]
SUBSYST MDAC ID ITEM:	EM:	1		1	FRCS 11211 DIODE												•	•	•
LEAD AN	ALY	ST	:	Ε). НА	RT	MA	N											
ASSESSM	ENT	:																	
		F.	アナピア	11'			R	EDUI	IADI	1CY	sc	CREEN	S				CI	_	
]	HD	W/F	JNC	ı		A			B	3		С			•	IT]	ĽΜ	
NASA IOA	[[3	/1F /1F	?] ?]		[P P]	[F]	[P P]		[[]	Х] Х]	*
COMPARE	[/]]								(]	
RECOMMEN	[ACI	ric	ons:		(If	di	f1	ere	nt	fr	om 1	NASA))						
												[P]] ADD	D /D) ELE	ETE)
* CIL RE	TEN	TI	ON	RAI	'IONA	LE	:	(If	ap	pli	ical	ble)							
REMARKS:												IN	AD	EQ	UATE UATE	Ī]	
NO DIFFE	REN N O	CE F	S II A LI	N C EAK	RITI	CA:	LI ST	TY. ANDI	B 3Y 1	SC TUN	REE	en sh Con.	OU	LD	BE	"NA	m]	BEC	AUSI

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 05-6KF-	212X	2-3				1	NAS BA	SA DATA: ASELINE NEW	[x]]]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11212 DIODE										
LEAD ANALYST:	D. HAR	<u>rman</u>									
ASSESSMENT:							-37 <i>C</i>			CIL	
CRITICAL		RE	DUNDA	NC	Y	SCREE	SNS			ITEM	I
FLIGH HDW/FU		A			В			С			
NASA [3 /11 IOA [3 /11	₹] ₹]	[P]	[F F]	[P P]	[X] *
COMPARE [/		ί]	ι		3	[1	[]
RECOMMENDATIONS	: (If	dif	feren	t:	fr	om NA	SA)		_	_
[3 /1	R]	[P]	[N	A]	[P] (2	D] DD/D] ELETE)
* CIL RETENTION	RATION	ALE:	(If	ap	pl	icabl	.e) 1	A NA	DEQUATE DEQUATE	[]
REMARKS: NO DIFFERENCES ISOLATION OF A	IN CRIT LEAK IS	ICAL A S	ITY. TANDI	E 3Y	FU	CREEN	NC NC	SHC	ULD BE	"NA"	BECAUSE
ISSUE NOT RESO	LVED AT	MEET	ING I	VI.	СН	SUBS	YS'	ΓEN	MANAGE	R ON	1/20/88.

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	FDCC_	88 11213X		NASA BASE	DATA: LINE [] NEW []
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11213 DIODE				. ,
LEAD ANALYST:	D. HA	RTMAN			
ASSESSMENT:					
CRITICA FLIC		REDUN	DANCY SCR	EENS	CIL
HDW/1	TUNC	A	В	С	ITEM
NASA [/ IOA [2 / 1	.R]	[] [P]	[[] [P]	[] *
COMPARE [N /N]	[N]	[N]	[N]	[N]
RECOMMENDATIONS	: (If	differen	t from N	ASA)	
			[F]	_	[A] (ADD/DELETE)
* CIL RETENTION	RATIONA	LE: (If	applicabl		
REMARKS:	INTO A NOTE - THE			ADEQUA:	re į į
LOSS OF ALL REDI	S.	ITS CAUS	ES INABIL	ITY TO EXI	PEL PROPELLANTS
NO FMEA EXISTS I	OR THIS	FAILURE.	CRITIC	ALITY ISSU LED OFF TH	VE IS TIED TO

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-1: NONE	3 1214X		NASA DATA: BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11214 DIODE				
LEAD ANALYST:	D. HAR	TMAN			
ASSESSMENT:					
CRITICAL		REDUNDA	NCY SCREE	INS	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [/ IOA [2 /1F]	[] [P]	[] [F]	[] [P]	[x] *
COMPARE [N /N	3	[N]	[и]	[и]	[N]
RECOMMENDATIONS	: (If	differen	t from NAS	SA)	
_	R]	[P]	[F]	[P]	[A] ADD/DELETE)
* CIL RETENTION	RATION	ALE: (If	applicabl	e) ADEQUATE INADEQUATE	
REMARKS: LOSS OF ALL RED TO MEET CG LIMI	UNDANT	JETS CAUS	ES INABIL	ITY TO EXPE	L PROPELLANTS
NO FMEA EXISTS THE IOA HARDWAF	FOR THI RE CRITI	S FAILURI	E. CRITIC OR THE FAI	ALITY ISSUE LED OFF THR	IS TIED TO

ASSESSM ASSESSM NASA FM	ENT :	ID:	1/29/ FRCS- NONE			.5X]		DATA ELINE NEW	[]	
SUBSYST MDAC ID ITEM:			FRCS 11215 DIODE											•	•	
LEAD AN	ALYSI	r:	D. HA	RT	MA	N										
ASSESSMI	ENT:															
CRITICALITY REDUNDANCY SCREENS FLIGHT									CI	-						
	HE	W/FU	NC		A			В			C	:		ITI	LM	
NASA IOA	[3	/ /1R]	[P]]	F]	[P]		[}] * []	
COMPARE	[N	/N]	[N]	[N]	[N]		[]		
RECOMMEN	DATI	ons:	(If	đ:	ifi	fere	nt f	ro	m N	ASA	.)					
			1				[[]	(AD	[A D/D] ELETE	Ξ)
* CIL RE	TENT:	ION F	RATION	\L	E :	(If	app	li	.cab	le)						•
REMARKS:										I	NAI	DEQU.	ATE] []	
LOSS OF	ALL I	REDUN IMITS	DANT J	ΈΊ	'S	CAUS	SES	IN	ABI	LIT	Y T	ro e	XPEL	PRO	PELLA	NTS

NO FMEA EXISTS FOR THIS FAILURE. CRITICALITY ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF THRUSTERS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-112 NONE	216X		NASA DATA: BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11216 DIODE				
LEAD ANALYST:	D. HARTI	MAN			
ASSESSMENT:					
CRITICAL		REDUNDAN	ICY SCREE	INS	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [/ IOA [3 /1F] [] P]	[] [F]	[] [P]	[x] *
COMPARE [N /N] [и]	[и]	[и]	[N]
RECOMMENDATIONS	: (If d	lifferent	from NAS	5A)	
[3 /11	Rj [[P]	[F]	[P]	[A] ADD/DELETE)
* CIL RETENTION	RATIONAL	LE: (If a	pplicablo	e) ADEQUATE INADEQUATE	
REMARKS: LOSS OF ALL RED TO MEET CG LIMI	UNDANT JI TS.	ETS CAUSE	S INABIL	ITY TO EXPE	L PROPELLANTS
		DATTIIDE	CRTTTC	ALITY ISSUE	IS TIED TO

NO FMEA EXISTS FOR THIS FAILURE. CRITICALITY ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF THRUSTERS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-11 NONE				NASA DATA BASELINE NEW	: []
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11217 DIODE					
LEAD ANALYST:	D. HART	MAN				
ASSESSMENT:						
CRITICAL) FLIGHT		REDUND	ANCY	SCRE	ENS	CIL
HDW/FUN	=	A	В		С	ITEM
NASA [/ IOA [2 /1R] [P]	[[F]	[] [P]	[] * [X]
COMPARE [N /N] [N]	[N]	[N]	[N]
RECOMMENDATIONS:	(If di	ifferent	fr	om NAS	SA)	
[2 /1R			[F		[P]	[A] DD/DELETE)
* CIL RETENTION R	ATIONALE	E: (If a	ppl	icable		
REMARKS:					ADEQUATE INADEQUATE	[]
LOSS OF ALL REDUNI TO MEET CG LIMITS	DANT JET	'S CAUSE	s in	IABILI	TY TO EXPEL	PROPELLANTS

NO FMEA EXISTS FOR THIS FAILURE. CRITICALITY ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED OFF THRUSTERS.

ASSESSMEN ASSESSMEN NASA FME	T	ID	TE:	FRC	9/88 S-112 6KF-2		·1				NASA D BASEL			K]
SUBSYSTEM MDAC ID:	M:			FRC 112 DIC	18										
LEAD ANA	LYS	T:		D.	HART	MAN									
ASSESSME	NT:														
	CR1			YTI		RED	JNDAN	CY	SCRE	EENS	;		CI IT		[
	F		JIGH V/FU			A		В			С				
NASA IOA	[2 2	/2 /2]]]	[[]	[]		[X X] *
COMPARE	[/]	[. 1	(]	[3		[]
RECOMMEN	IDA'	TI:	ONS	:	(If d	liffe	rent	fr	om N	ASA)				
	[/]	[. 1	[]	[]	(A	[DD/	′DI] ELETE)
* CIL RI	:			RAT	IONAl	LE: (If ap	pl	icab		ADEQU NADEQU		[]
NO DIFF	CKE	TAC	.E3.												

ASSESSM	ENT	' I	D:		FRCS-11219X BA 05-6KF-2266-1							nas Ba	SEL	IN]					
SUBSYST MDAC ID ITEM:					11	RCS 1219 CODE																
LEAD AN	ALY	ST	:		D.	НА	RT	MA	N													
ASSESSM	ENT	:																				
	CR		IC!			•		R	EDU	עם גם	ANG	CY	sc	CREE	NS					IL	-	
]	HD	W/F	TUN	IC			A				В С						1.	TEN	1		
NASA IOA]	3 3	/1 /1	LR LR]		[P P]		[F F]	1	I	?]]	X X]	*
COMPARE	[/]		[]		Į]	(]			[]	
RECOMMEN	IDA'	ric	ONS	:		(If	d:	ifi	fer	ent	: f	rc	m	NASA	(۱							
	[/]		[]		[]	(]		(A	[DD/] LE	TE
* CIL RE	TEN	ΙΤΙ	ON	R	AT:	ION?	LE	Ξ:	(I	f a	pp	li	ca:	ble)								
REMARKS:														I		DEQ DEQ			[[]	
NO DIFFE	REN	CE	s.																-		-	

ASSESSMEN ASSESSMEN NASA FME	T	ID	TE:	FRO	29/8 CS-1 -6KF	12								SA D ASEL		[x]	
SUBSYSTEM MDAC ID:	M:				CS 220 ODE														
LEAD ANA	LYS	T:		D.	HAR	TM	IAN	ſ											
ASSESSME	NT:	:																	
	CR]			LTY.			RI	EDUND	AN	CY	SCI	REENS	;			CI	L EM	[
	ŀ		JIGH I/FU				A			В			С						
NASA IOA	[3	/1F /1F	R]		[P P]	[F F]	ĵ [P P]		[X X] *	
COMPARE	[/]		[1	(]	£]		[]	
RECOMMEN	IDA'	TIC	SMC	:	(If	d.	if	ferei	nt	fr	om 1	nasa))						
	[/]		[]	(]	[]	(A	DD,	/DI] ELET	E)
* CIL RI	ETE	NT:	ION	RAT	CION	AL	E:	(If	aı	ppl	ica			DEQU DEQU]	
REMARKS:		NC	ES.														-		

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 FRCS-112 05-6KF-2	21X 258-3			N	ASA DATA BASELINI NEV	
SUBSYSTEM: MDAC ID: ITEM:	FRCS 11221 DIODE						
LEAD ANALYST:	D. HARTM	AN					
ASSESSMENT:							
CRITICALI FLIGHT		ИСХ	SCRE	ENS		CIL	
HDW/FUN	IC 1	A	В		С		ITEM
NASA [3 /2R IOA [2 /2] [?]	[P]	[P]	[] * [X]
COMPARE [N /N] [1	1]	[И]	[N]	[N]
RECOMMENDATIONS:	(If dif	ferent	fro	m NAS	SA)		
[2 /2] []	[]	[[A] DD/DELETE)
* CIL RETENTION R	ATIONALE:	(If a	ppli	cable	<u>.</u>)		·
REMARKS:					AC INAC	EQUATE EQUATE	. ,
THIS FAILURE CAUS OF VERNIERS THUS I	ES THE IN MISSION O	ABILITY PERATIO	Y TO	OPEN	THE	VALVE,	CAUSING LOSS

ISSUE IS TIED TO THE IOA HARDWARE CRITICALITY FOR THE FAILED CLOSED MANIFOLD 5 ISOLATION VALVE.

ASSESSMEN ASSESSMEN NASA FME	T I	D:	ARC	:S-1	30		6A-1	L					SA DA ASELI N]	X]	
SUBSYSTEMDAC ID:	M:		ARG 130 COI)2	LI	ÆR	, RI	emo	TE	POW	VER							
LEAD ANA	LYSI	r:	D.	HAR	TM	IAN	ſ											
ASSESSME	NT:																	
		FICAL FLIGH				RE	DUNI	DAN	CY	SCI	REENS	3			CI II	L EM	1	
		DW/FU				A			В			С						
NASA IOA	[:	3 /1R 3 /1R]		[P P]	[P F]	[P P]		[x]	*
COMPARE	[/]		[]	[N]	[]		[N]	
RECOMMEN	DAT	ions:		(If	d:	if	fere	nt	fr	om 1	NASA)						
	[/	1		[]	1]	[3	(A	[DD,	/D]] ELF	ETE)
* CIL RE	TEN	TION	RAT	'ION	ΑL	E:	(If	aj	ppl	ica			DEQUA DEQUA]	
REMARKS:						_												

IOA AGREES WITH NASA FMEA.

ASSESSMI ASSESSMI NASA FMI	ENT	II		ARC	9/88 S-13 6KA-	03		-2					ASA DA BASEL:		[x]	
SUBSYSTE MDAC ID:				ARC: 130: CON!		LE	R, :	REM	OTI	E PO	WER							
LEAD ANA	LYS	ST:		D. I	HART	MA	N											
ASSESSME	NT:	1																
	CRITICALITY REDUNDANCY SCREENS FLIGHT HDW/FUNC A B C														CI IT	L EM	[
	H	/FUI	VC			E	3		С									
NASA IOA	[3 3	/3 /1R]	[P]	İ	F	.]	[P]]	X]	*
COMPARE	[/N]	[N]	i	N]	[N]		[N]	
RECOMMEN	DAT	ΊΟ	NS:	(I	f di	Ĺfí	fere	ent	fr	om 1	NASA))						
	[ı	/]	[]	(]	[]	(AD	[D/1	DE:] LE'	TE)
* CIL RE	TEN	TI	ON F	OITA	NALE	E:	(If	f ap	pl	icak	·		EQUAT		[:]	
REMARKS: IOA AGRE	ES '	WI:	TH N	ASA	FMEA	۱.					4.4	·AL	TONT	E	L	•	1	

ASSESSMEN ASSESSMEN NASA FMEA	T ID	TE:	ARC	CS-13	04	7€	6A-1						SA D ASEL	INE]
SUBSYSTEM MDAC ID:	ſ:		ARG 130 COI	04	LLE	R	, REM	(OT	Ξ	POWER						
LEAD ANA	LYST:	:	D.	HAR	CMA	N										
ASSESSME	T:															
CRITICALITY REDUNDANCY SCREENS FLIGHT														CIL		
	FLIGHT HDW/FUNC A B C															
NASA IOA	[3 [3	/1R /1R	NC A B C												[] *
COMPARE	C	/]		[]	[]	[]		[]
RECOMMEN	DATI	ons:		(If	di :	E1	feren	t f	r	om NA	SA)				
	[/]		[]	ĺ]	[]	(2	[ADD/1] DELETE)
* CIL RE	TENI	NOI	RA!	rionz	LE	:	(If	app	, 1	icabl			DEQU DEQU]
REMARKS:	: ERENC	CES.		-												

ASSESSM ASSESSM NASA FM	ENT	ני	D:	A.	/29/8 RCS-1 5-6KA	305		5 A -2				Ŋ	NASA D. BASEL]	
SUBSYST MDAC ID ITEM:				1	RCS 305 ONTRO	LLE	ER,	REMO	ΤE	PO	WER			·	-	•	
LEAD AN	ALY	ST	' :	D.	HAR'	I'MA	N										
ASSESSMI	ENT	:															
	CR		ICAL LIGH		<u>r</u>	R	ED	UNDAN	CY	SC	REEN	s			IL		
	•	HD	W/FU	NC		A			В			С		Ι	TE	M	
NASA IOA	[3 3	/3 /1R]	[F]	[F]	[P]	[x]	*
COMPARE	[/N]	(N]	[N]	[N]		N		
RECOMMEN	DAT	ric	ons:		(If d	if	fer	ent :	fro	om N	IASA))					
	[/]	[]	[]	[_	[(ADD)	/DE] ELE	TE)
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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1310 CONTROL	LER, RE	MOTE POWE	R	
LEAD ANALYST:	D. HART	MAN			
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LEAD ANALYS	T:	D. H	ARTMAN	1										
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-13 05-6KA-	24	1			: [x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1324 DIODE					
LEAD ANALYST:	D. HART	MAN				
ASSESSMENT:						
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-132 05-6KA-2				NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1325 DIODE					
LEAD ANALYST:	D. HARTM	AN				
ASSESSMENT:						
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FMEA	T ID	re:	ARC	9/88 S-13 -6KA-	,,,	4 25:	2-1				!	NAS BA	SA DAS ASELII N	NE	[x]	
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ASSESSMEN	T:																
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COMPARE	[/]		[N	3		[]	[1		(N]	
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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1335 DIOD	Ε			···-·· [A]
LEAD ANALYST	: D. H	ARTMAN			
ASSESSMENT:					
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HD	/FUNC	A	В	С	ITEM
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RECOMMENDATIO	NS: (If	differen	t from NA	SA)	
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* CIL RETENTI	ON RATIONA	LE: (If a	applicable	≘)	•
REMARKS:				ADEQUATE INADEQUATE	[]
NASA FMEA CONT EFFECT.	TAINS MULT	'IPLE FAII	URES. TH	HIS FAILURE	ALONE HAS NO

THEREFORE, THIS ISSUE REMAINS OPEN.

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS

DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

ASSESSMI ASSESSMI NASA FMI	ENT	ID	:	ARC	9/88 5-13: 6KA-:	36	7 - 1							DATA: LINE NEW	[]	
SUBSYSTI MDAC ID: ITEM:				ARC: 1330 DIO	6												
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ASSESSM	ENT	:															
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COMPARE			/		(1					[(]	
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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SUBSYST MDAC ID ITEM:			AR(13: DI(-	•	
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ASSESSMI	ENT	:											
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		02 A- 1			NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1338 DRIVER, H	YBRID				
LEAD ANALYST:	D. HARTMA	N				
ASSESSMENT:						
CRITICAL FLIGH		EDUNDA	NCY	SCREEN	S	CIL ITEM
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* CIL RETENTION	RATIONALE:	.ppli		ADEQUATE NADEQUATE		
REMARKS: IOA AGREES WITH	NASA FMEA.					

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SUBSYSTEM MDAC ID: ITEM:	:		ARCS 1339 DRIVE														
LEAD ANALY	YST	:	D. HA	RTI	MA	N											
ASSESSMENT:																	
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SUBSYSTEM MDAC ID:	:		134	0	,	нч	BRID		,							
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SUBSYST MDAC ID ITEM:				13	RCS 341 RIVE	R,	н	YB	RID									•		,	
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SUBSYSTEM MDAC ID:	:	ARCS 1342 DRIVE	R, HYBRID			
LEAD ANAI	YST:	D. HA	RTMAN			
ASSESSME	CIL ITEM					
	FLI	GHT FUNC	В	С		
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LEAD ANALYST	':	D. HAF	(AMT)	ſ							
ASSESSMENT:	OTT										
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* CIL RETEN	TION	RATION	ALE:	(If	app]	icabl.		ADEQUATE ADEQUATE	[]	
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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ASSESSMI	ENT	':																			
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REMARKS: NO DIFFE	REN	CF	יכ											¥1,	יהי	πQ0	ATE	Ł]	

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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1348 DRIVER	, ну	BRID												
LEAD ANALYST:	D. HAR	(AMT	1												
ASSESSMENT:	CRITICALITY REDUNDANCY SCREENS CIL ITEM														
CRITICALITY REDUNDANCY SCREENS ITEM FLIGHT B C HDW/FUNC A B															
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NASA [3 /3 IOA [3 /3]	[]	[]	[]	-							
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ISSUE NOT RESC	LVED AT	ME	ETING	WITI	i sub	SYST	em man	AGER ON 1/20/88							

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SUBSYST MDAC ID ITEM:		:		:	ARCS 1349 DRIV		F	IYBF	lD.						24.	 [Λ]
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SUBSYSTEM: MDAC ID: ITEM:		HYBRID			
LEAD ANALYST:	D. HAR	NAMT			
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NO DIFFERENCES.

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OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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REMARKS: NO DIFFE	REN	CE	s.										-11	·AD	POONT	Ľ	l	J	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	AKCS-I-	3 364 -2001-1		NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1364 FUSE,				
LEAD ANALYST:	D. HAR	TMAN			
ASSESSMENT: CRITICA	LITY	REDUND	ANCY SCRE	ens	CIL ITEM
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NO DIFFERENCES.

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ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

IOA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FOR THIS FMEA.

ASSESSMEN ASSESSMEN NASA FMEA	T II	TE:	ARCS	/88 -1368 KA-207	/6 - 1				ASA D BASEL]
SUBSYSTEM MDAC ID:	1 :		ARCS 1368 RESI		5.1K	1/4	W					
LEAD ANA	LYST	:	D. H	(ARTMA)	1							
ASSESSME	NT:											
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ASSESSMENT DA ASSESSMENT II NASA FMEA #:	D:	1/29/88 ARCS-1: 05-6KA	372	7-1				SA DATA: ASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1372 RESIST	OR,	5.1K	1/4W	,				
LEAD ANALYST	:	D. HAR	TMAN							
ASSESSMENT:										
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

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SUBSYST MDAC ID ITEM:					ARC 137 RES		5.	1K 1/4	W						
LEAD AN	AL	YS'	r:		D.	HARTMA	N.								
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SUBSYSTEM MDAC ID:		ARCS 1374 RESIST	or,	5.1K	1/4	Ň						
LEAD ANA	LYST:	D. HAI	(AMT)	Ī								
ASSESSME	NT:											
CRITICALITY REDUNDANCY SCREENS CIL ITEM												
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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SUBSYSTEM: MDAC ID:	ARCS 1376 RESISTOR,											
LEAD ANALYST:	D. HARTMA	N										
ASSESSMENT:												
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1378 RESIST	OR,	5.1K	1/4	N					
LEAD ANALYST:	D. HAR	(AMT	1							
ASSESSMENT:								0. T	.	
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Assessi	IEN'I	T:													
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ISSUE RE (SHORT F	SOL	VE UR	D E	on Mod	1/2 E T	0/88 O BE	AT M	EETII VED).	NG WI	TH SU	BSYSI	EM M	ANA	GER	

ASSESSMEN ASSESSMEN NASA FMEA	TD:	ARCS-1	380	7-1				ASA DATA BASELINE NEV]	
SUBSYSTEM MDAC ID:		ARCS 1380 RESIST	OR,	5.1K	1/4W	ī					
LEAD ANA	LYST:	D. HAI	(AMT)	1							
ASSESSME	NT:										
CRITICALITY REDUNDANCY SCREENS CIL ITEM											
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COMPARE	[/	1	[]	[1	[]	ĺ]	
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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SUBSYSTE MDAC ID:	EM:		ARCS 1381	S		LK 1/						
LEAD ANA	LYS'	r:	D. H	IARTM	AN							
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SUBSYSTE MDAC ID: ITEM:			ARCS 1382 RESI		5.1	K 1/4V	1						
LEAD ANA	LYS'	T:	D. H	ARTMAI	1								
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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1383	roR, 5.1											
LEAD ANALYST:	D. HAI	RTMAN											
ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL ITEM													
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REPORT DATE 2/26/88 C-1564

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SUBSYSTEM MDAC ID:	M:		ARCS 1384 RESI		5.1H	K 1/4V	N					
LEAD ANA	LYST	:	D. H	(ARTMA)	1							
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ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	: 1/29/8 ARCS-1 05-6KA	8 .388 2077-	-1			SA DATA: ASELINE NEW]]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1388		1K 1/4					
LEAD ANALYST:	D. HAI	RTMAN						
ASSESSMENT:								
CRITICA FLIC	LITY	REDU	JNDANCY	SCREE	NS		CIL ITEM	
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ISSUE NOT RES	LVED AT	MEETI	NG WITH	SUBSY	STEM	MANAGER	ON	1/20/88.

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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1390 RESIS	ror,	5.1K	1/4	1					
LEAD ANALYST:	D. HA	RTMA	N							
ASSESSMENT:										
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ASSESSMEI ASSESSMEI NASA FME	9/8 S-1 6KA	8 39: -2:	2 078	-1							DATA: LINE NEW]					
SUBSYSTEMDAC ID:	M:			139	2S 92			.2K										
LEAD ANA	LYS	T:		D.	HAR	TM	AN											
ASSESSME																		
	CRI		CAL				RED	UNDA	NC	Y	SCI	REEN	IS			CIL ITEM		
	FLIGHT HDW/FUNC						A			В			С					
NASA IOA	NASA [3 /3] IOA [3 /3]					[]]	[]	!	·]		[]	*
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* CIL R	ETE	TN	ION	RAI	NOI	AL	E:	(If	ap)	ρl	ica		-		JATE JATE]	
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ISSUE N	TO	RE	ESOL	VED	ΑT	ME	ETI	NG V	TIV	Ή	sui	BSYS	TE	M MA	NAGER	ON	1/	20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-13 05-6KA-	93 2078-1				ASA DATA BASELINE NEW]
145	ARCS 1393 RESISTO	R, 1.2K	2W					
LEAD ANALYST:	D. HARTI	MAN						
ASSESSMENT:								
CRITICAL: FLIGHT		REDUNDA	MCY :	SCREE	NS		CIL	
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RECOMMENDATIONS:	(If di	fferent	from	n NAS	A)			
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* CIL RETENTION R	ATIONALE	: (If a	pplic	able				
REMARKS:					CNAD	EQUATE EQUATE	Ĩ	
THIS FAILURE MAY POSITION. REDUND. TO FALSELY FAILING OPERATIONS.								

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT D ASSESSMENT I NASA FMEA #:	ATE: D:	1/2 ARC 05-	9/88 S-13 6KA-	94 207	7-1				SA DATA: BASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:		ARC 139 RES	4	OR,	5.1K	1/4W	ī				
LEAD ANALYST	:	D.	HART	MAN	ī						
ASSESSMENT:			•								
CRIT	rical	ITY		RI	EDUNDA	ANCY	SCRE	ENS		CIL ITEN	
-	FLIGH DW/FU			A		В		С			
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COMPARE [/]		[1	[]	[]	[]
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ί	3 /2I	?]		[P]	[P]	[F	?] (#	[\DD/D] ELETE)
* CIL RETEN	TION	RAT	ION?	LE:	(If	appl	icab:		ADEQUATE ADEQUATE]
REMARKS: THIS FAILUR POSITION. TO FALSELY OPERATIONS.	REDU!	Y CANDAL	AUSE NCY 1 THE	LOS PROV VAI	SS OF VIDED. LVE CI	ACCU LOSEI	RATE SS O), PO	IND: F AL: SSIB:	ICATION (L REDUND) LY EFFEC	OF TH ANCY TING	E VALVE MAY LEAD MISSION
ISSUE NOT I	RESOL	VED	AT 1	MEE'	ring 1	HTIW	SUBS	YSTE	m manage	R ON	1/20/88.

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SUBSYST:	EM:			ARC 139	S 5		1K 1/						
LEAD AND	ALY	ST	':	D. 1	HARTM	AN							
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SUBSYSTEM MDAC ID:				ARG 139 RES	96	oR,	5.1K	1/41	A						
LEAD ANA	LYS	T:		D.	HAR	(AMT	1								
ASSESSME	T.												6 T T		
CRITICALITY REDUNDANCY SCREENS FLIGHT													CIL		
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REMARKS THIS FAI POSITION TO FALS OPERATION	M. Ely	R F	MA EDU AIL	Y C. NDA ING	AUSE NCY THE	LOS PROV	SS OF VIDED LVE C	ACC LOSE	URATI OSS (D, P	E IND: OF AL: OSSIB:	ICATIO L REDU LY EF	ON C UND# FECT	F TH MCY TING	IE MA MI	VALVE Y LEAD SSION

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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COMPARE		[/		ſ]			ξ			[]		
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REMARKS:									INA	DEQUA	ATE	į	4		
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LEAD ANA	LYST	:														
ASSESSME	NT:															
	CRITICALITY REDUNDANCY SCREENS CIL ITEM															
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NASA IOA	[3	/ /1R]	[P]	[P]	[P]		[]	*
COMPARE	[N	/N	1	(N]	[N]	[N)		[]	
RECOMMEN	IDATI	ons:	(If d	lif	fer	ent	fr	om 1	NASA	.)					
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SUBSYST MDAC ID ITEM:			ARC 139 L/R	9	ζ &	FU I	SOL	VLV 2	A OR	B SWI	тсн		
LEAD AN	ALYS	T:											
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SUBSYSTE MDAC ID:				ARCS 1400 L/R HI	E C	X	& F	U I	:S	OL	ΔΓ	V A	. (OR	В	sw	ITO	CH		
LEAD ANA	LYS	T:																		
ASSESSME	NT:	3																		
	CRI			[TY		RE	DUN	IDA1	1C	Y	SCR	EEN	ıs					CII	_	
	I		LIGH' V/FUI			A				В				С						
NASA IOA	[3	/ /1R]	[P]		[[P]		[P]			[]	*
COMPARE	[N	/N]	[N	3		[N]		[N]			[]	
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REMARKS HELIUM ANALYZE	OXI	DI Y	ZER IOA.	AND FU	EL AS	I SE	SOL SSM1	ATI ENT	01	ID:	VAL' s A'	VE RCS	A :	& 12(В)76	SW:	ITC 120	HES 80X	RE	-

ASSESSM ASSESSM NASA FM	ENI	C I	D:		CS-140	1				NASA DA BASELI]	
SUBSYST MDAC ID ITEM: CONTACT	:		2	AR 14 L/	01	K &	FU I	SOL V	LV A	OR B SW	/ITCH	OPE	N
LEAD AN	ALY	ST	':										
ASSESSMI	ENT	:											
	CR		ICA LIGI		F	REDU	JNDAN	CY SCI	REENS		CI	L EM	
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NASA IOA	[3	/ /3]	[]	[]	[]	[]	*
COMPARE	[N	/N	3	[]	[]	[]	[]	
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REMARKS:									INA	DEQUAT	ັ່ງ ອ]	
HELIUM O	XII B	OIZ Z I	ZER [OA.	AND SE	FUEL IS E ASSES	SOL SSM	ATION ENT I	VALV Ds AR	E A &	B SWIT	CHES	RE-	

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	E: ARCS-1	402					SA DATA ASELINI NEV]
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1, 2	ARCS 1402 L/R HE	ox &	, FU	ISOL	VLV 2	A OR	B SWI	TCH OP	EN
LEAD ANALYST:									
ASSESSMENT:									
	CALITY	REI	OUNDA	NCY	SCREE	NS		CIL ITEN	1
	IGHT FUNC	A		В		С			
NASA [/	/] /3]]]	[]	[]	[] *]
COMPARE [N ,	/N]	(3	[]	[]	[]
RECOMMENDATIO	NS: (If	diff	erent	t fro	om NAS	SA)			
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REMARKS: HELIUM OXIDIZ ANALYZED BY I	ER AND FU	EL IS ASSES	OLAT SMEN	ION T ID	VALVE s ARC	A &	B SWI' 076X-1	TCHES 2080X.	RE-

ASSESSM ASSESSM NASA FM	ENT	ID:		S-1403				NASA D BASEI]	
SUBSYST MDAC ID ITEM: CONTACT	:	4	ARC 140 L/R	_	& FU I	SOL V	LV A	OR B S	WITCH (OPEI	N
LEAD AN	ALYS	T:									
ASSESSM	ENT:										
	;	TICAI FLIGH	T		DUNDAN	CY SCI	REENS		CII ITI		
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COMPARE	[]	N /N]	[]) []	C]	[]	
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* CIL RE	TENI	'ION	RATIC	NALE: (If app	licab	le)				
REMARKS:							A INA	DEQUAT	Ξį]	
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ASSESSME ASSESSME NASA FME	NT ID:	ARCS-1	404					ASA DA BASELI N]
SUBSYSTE MDAC ID: ITEM: CONTACTS		ARCS 1404 L/R HE	хох	& FU	ISO	r ara	A C	R B SW	ITCH O	PEN
LEAD ANA	LYST:									
ASSESSME	ENT:									
	CRITICAL		RI	EDUND	ANCY	SCRE	ENS		CIL	
	FLIGH HDW/FU		A		В		(2		
NASA IOA	[/]	[]	[]	[[]	[] *]
COMPARE	[N /N	1	[]	[]	[]	[]
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REMARKS HELIUM ANALYZE	: OXIDIZER D BY IOA	AND FU	EL I ASSI	SOLA'	rion nt i	VALVI Ds ARG	E A CS 1	& B SW L2076X-	VITCHES -12080X	RE-

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SUBSYST MDAC ID ITEM: CONTACT	:			1	RCS 405 /R H	E	ох	.	FU	I	so	L	VLV	A	. 0	R	B SV	VIT	СН	C	LO	SE
LEAD AN	ALY	ST	':																			
ASSESSMI	ENT	:																				
	CR		ICAI LIGH		Y		R	EDU	JNDA	N	CY	S	CREE	N	S					ΙL		
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NASA IOA	[3	/ /1R]]	P]		[F]		[P]			[х]	*
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HELIUM O	XID BY	IZ	ER A	AND S	FUE EE A	L SS	IS ES	OL SM	ATIC ENT	N I	V. Ds	AL A	VE A RCS	1	& 20	B :	SWI] X-12	CH:	ES 0X	R	E-	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1	406				N		DATA: LINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 5, 6	ARCS 1406 L/R HE	ох	& FU	ISOL	VLV	A (OR B	SWITC	н СІ	OSE
LEAD ANALYST:										
ASSESSMENT:										
CRITICAL		RI	EDUND	ANCY	SCRE	ens			CIL	
FLIGH HDW/FU		A		В			С			
NASA [/ IOA [3 /11] R]	[[P]	[[P]	[P]		[] *]
COMPARE [N /N]	[N]	[N]	[N]		[]
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* CIL RETENTION	RATION	ALE:	(If	appl	icabl			QUATE QUATE	[]
REMARKS: HELIUM OXIDIZER ANALYZED BY IOA	AND FU	EL I ASSI	SOLA'	TION NT ID	VALVI S ARG	E A CS	& B 1207	SWIT(6X-12(CHES 080X	RE-

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SUBSYST MDAC ID ITEM: CONTACT	:			ARC 140 L/R	7	ox	: &	FU]	csc)L V	LV A	. 0	RBS	WITC	H (OPF	en
LEAD AN	ALY	ST	:														
ASSESSM	ENT	:															
		F	LIGH					U NDA N	CY	SC	REEN	s			CII	-	
	1	1DI	W/FU	NC		A			В			С		_			
NASA IOA]	3	/ /1R]]	P]]	F]	[P]	[K	[]	*
COMPARE	[N	/N]	[N]	[N	J	[N]	[N	,	
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HELIUM O ANALYZED	XID BY	IZ I	ER A	ND F	UEL ASS	IS ES	OL SM	ATION ENT]	V Ds	ALV AR	E A CS 1	& 20	B SWI 76X-1	TCHE:	3) K.	RE-	•

ASSESSMENT ASSESSMENT NASA FMEA	ID		ARCS-1	40	8									DAT LIN NE	E	-]	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 7	, 8		ARCS 1408 L/R HE	: c	x	&	FU	IS	OL	VLV	A	OR	В	SWI	TC	н О	PEN	
LEAD ANALY	ST:																	
ASSESSMENT	:																	
CR			ITY		RE	DU	NDA	ANC	Y	SCRE	ENS	3				CIL		
		LIGH' 1/FU			A				В			С						
NASA [IOA [3	/ /1R]	[P]]	P]	[P]			[]	*
COMPARE [N	/N	1	[N]		[N	1	[N]			[]	
RECOMMENDA	TIC	ons:	(If	đ	if:	feı	ren	t :	fro	om NA	SA)						
ſ		/	1	[]		[]	[]		(AI		ELI DELI	ETE)
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REMARKS: HELIUM OX ANALYZED	IDI BY	ZER IOA.	AND FU	EL AS	, I SE	SO: SS:	LAT MEN	'IO T	N T	VALVE s ARC	E A CS	. & 12	В 07 <i>6</i>	SWI'	TCI 208	HES BOX	RE	-

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SUBSYST MDAC ID ITEM: CONTACT:	:		10	AR(14(L/)		چ ک	FU ISC)L V	/LV A	OR E	S SWI	тсн	GPC	
LEAD AND	ALY	ST	!:											
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	CR		ICA:	LITY HT	R	EDU	NDANCY	sc	REENS			CI		
		HD	W/F	UNC	A		В		(2		11	'EM	
NASA IOA	[3	/3]]]	[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	DA:	ric	ons:	(If dif	fer	ent fro	om 1	NASA)					
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HELIUM O	XIC BY	IZ	ER OA.	AND I	FUEL IS E ASSES	OLA SME	TION VENT IDS	ALV AR	TE A & RCS 12	B S 076X	WITC:	HES BOX.	RE-	

ASSESSMENT ASSESSMENT NASA FMEA	ID:	ARCS-1	410					DATA: ELINE [NEW []
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 9	, 10	ARCS 1410 L/R HE	ох	& FU	J ISOL	VLV A	OR B	SWITCH	I GP	С
LEAD ANALY	ST:									
ASSESSMENT	?:									
CF	RITICAL		R	EDUN	DANCY	SCREEN	S		CIL ITEM	
	FLIGH HDW/FU		A		В		С			
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COMPARE	[и /и]	[N]	[N] [и]		[N]
RECOMMEND	ATIONS:	(If	dif	fere	nt fro	m NASA	١)			
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REMARKS: HELIUM OX ANALYZED	IDIZER BY IOA	AND FU SEE	EL] ASSI	SOLA ESSMI	ATION V ENT IDS	VALVE ARCS	A & B 1207	SWITCH 6X-1208	ES :	RE-

ASSESSM ASSESSM NASA FM	ENT	I	D:		RCS-14	111	L					ŀ		A DA' SELII NI]	
SUBSYST MDAC ID ITEM: CONTACT:	:			1	RCS 411 /R HE	KO	ζ &	FU]	SC	L '	VLV A	. 0	R I	B SW]	ITCH	ı c	LO	SE
LEAD AN	ALY	ST	:															
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	ŀ	IDI	W/FU	NC		A			В			C			_	رضو ک		
NASA IOA]	3	/ /1R]]	P]]	F]]	P]		[[x]	*
COMPARE	[N	/N)	[N]	[N]	[N]		[N]	
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ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	ARCS-14	12			-	ASA DATA BASELINE NEW	[]]]
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 11, 12	ARCS 1412 L/R HE	ox &	FU IS	OL VLV	A Ol	R B SWIT	CH CLA	OSE
LEAD ANALYST:								
ASSESSMENT:								
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FLIG HDW/F		A		В	С			
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COMPARE [N /N] [N] [N]	[N]	[N]
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	ARCS 1413 L/R HE OX			A OI	R B SWIT	сн т	ALKBACK
LEAD ANALYST:	D. HARTMAI	N					
ASSESSMENT:							
CRITICALI FLIGHT	?	EDUNDANCY	SCREE	NS		CIL ITEN	a.
HDW/FUN	IC A	В		С		1111	•
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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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LEAD ANALYST:	D. HARTMA	W			
ASSESSMENT:					
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SUBSYSTEM: MDAC ID: ITEM:		ARCS 1416 L/R HI	FU	TANK	PRES	s-1 P	RESS	S SENSOR	!	
LEAD ANALY	(ST:	D. HAI	RTMAN	1						
ASSESSMENT	r:									
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LEAD ANA	LYST:		D. H	ARTMAN	ī							
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LEAD ANA	LYS	T:		D. HAF	AMT?	1								
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LEAD ANA	ALYST	r:											
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1430	NASA BAS	A DATA: SELINE [] NEW []
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1430 CONTROLLER, REMO	TE POWER	
LEAD ANALYST:			
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REMARKS: AFT MANIFOLD IS IN CIRCUITRY.	SOLATION VALVE #5 SEE ASSESSMENT I	RE-ANALYZED F Ds ARCS 12001)	SY IOA DUE TO CHANGE K-12075X.

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LEFT AND RIGHT OXIDIZER AND FUEL TANK ISOLATION VALVE 1/2 DIODES

RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12086X-12101X.

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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

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DEMA DVC -											IN	AI IAI	DEQUATE DEQUATE]]
REMARKS: AFT MANIF RE-ANALYZ	OI EI	D D	3, I 3Y IC	EFT AN	D E	RI AS	GHT,	FU SMEN	JEI VT	AND IDs	OX ARC	III S	DIZER MC 12224X-	A 12:	#3 239	DIODES

ASSESSME ASSESSME NASA FME	NT	II		ARCS-1	L455					ASA DA BASELI N		[]
SUBSYSTE MDAC ID: ITEM:				ARCS 1455 DIODE									
LEAD ANA	LYS	ST	:										
ASSESSME	NT:	:											
	CR:		ICAL LIGH	ITY	RI	EDUNDA	ANCY	SCREE	ens			CIL	A
	1	_		NC	A		В		C	•		112.	•
NASA IOA	[3	/3]	[]	[]	[]		[] *
COMPARE	[N	/N	3	[1	[]	[]		[]
RECOMMEN	DA!	ri	ons:	(If	dif	ferent	t fr	om NAS	5 A)				
	[/]	[]	[]	[]	(AI	[DD/DI] ELETE)
* CIL RE		NT	ION	RATION	ALE:	(If	appl:	icable	Z	ADEQUAT ADEQUAT]
REMARKS: AFT MANI	FO	LD	3, BV T	LEFT A	ND R	IGHT,	FUE:	L AND	OXI	DIZER	MCA	A #3	DIODES

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	AKC2-14	: 50			NAS Bi	SA DATA: ASELINE NEW	x]]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1456 DIODE							
LEAD ANALYST:	D. HAR	rman						
ASSESSMENT:							CIL	
CRITICAL		REDUNI	ANCY	SCREE	INS		ITEM	I
FLIGH HDW/FU		A	В		С			
NASA [3 /3 IOA [3 /3]	[]	[[]]	[]	[] *
COMPARE [/	1	[]	[]	[]	[]
RECOMMENDATIONS	: (If	differe	nt fr	om NA	SA)			
[3 /2]		[P]	[P)	[P] (2	[DD/D] ELETE)
* CIL RETENTION	RATION	ALE: (If	app]	icabl		DEQUATE	[]
REMARKS: THIS FAILURE MA POSITION. REDU TO FALSELY FAIL OPERATION.	Y CAUSE INDANCY ING THE	LOSS OF PROVIDED VALVE O	ACCI LOSE	JRATE OSS OF D, POS	INDI F ALI SSIBI	CATION (REDUND)	OF TH ANCY TING	E VALVE MAY LEAD MISSION

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM ASSESSM NASA FM	ENT	C ID:	A	/29/88 RCS-14 5-6KA-	57	-2]	NASA DA BASELI N] X 1
SUBSYST MDAC ID ITEM:			14	RCS 457 IODE						[Α ,
LEAD AN	ALY	ST:	D.	HART	MAN						
ASSESSMI	ENT	:									
		FLI			REDU	NDANC	CY SC	REENS		CI	
	1	HDW/	FUNC		A		В	С		IT	EM
NASA IOA]	3 /3	1R] 3]]	P j]	P]	[P]	[] *
COMPARE	[/1	1]	[N]	[и]	[и]	[]
RECOMMEN	DAT	CIONS	3:	(If di	ffere	nt f	rom N	JASA)			
]	[]	ι]	[-	[ADD/D] ELETE)
* CIL RE	ren	TION	RATI	ONALE	: (If	app]	licab	le)	·	,	,
REMARKS:						- -		AD	EQUATE EQUATE	[[]

IOA AGREES WITH NASA FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-145	8		NASA DATA: BASELINE NEW	_
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1458 DIODE				
LEAD ANALYST:					
ASSESSMENT:					
CRITICAI FLIGH		REDUNDANC	Y SCREEN	s	CIL ITEM
	INC I	A	В	С	TIEM
NASA [/ IOA [3 /2F] [] [F] [P] [p]	[] *
COMPARE [N /N] [1	4] [и] [N]	[N]
RECOMMENDATIONS:	(If di	fferent f	rom NASA)	
[/] [] [] [] (AI	[] DD/DELETE)
* CIL RETENTION REMARKS:	RATIONALE:	: (If app	•	ADEQUATE NADEQUATE	[]
AFT MANIFOLD 4, MCA #3 DIODES RE					

12240X-12255X.

ASSESSME	SSESSMENT DATE: SSESSMENT ID: ARCS-1459 ASA FMEA #:								ì	NASA D BASEI		[]	
SUBSYSTE MDAC ID:				ARCS 1459 DIODE	E									
LEAD ANA	LYS	T:												
ASSESSME	NT:													
CRITICALITY REDUNDANCY SCREENS FLIGHT												CIL		
			/FUI	_	1	A	E	3	2		LIE	M		
NASA IOA	[3 /	/ /3]	[]	[[]	[]]		[]	*
COMPARE	[N /	/N]	[]	(]	ſ]		[]	
RECOMMEN	DAT	IOI	NS:	(I :	f di	ffere	nt fr	om N	IASA)					
	[/	/]	[]	[]	[3	(Al	[DD/D		TE)
	CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []													
REMARKS: AFT MANI MCA #3 I	FOL	D 4	4, :	LEFT A	AND I	RIGHT BY I	OA.	DIZE SEE	R ANI ASSES	O FUEI	ISC ID:	OLAT s AR	ION	VALVE

12240X-12255X.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	AKC2_T	400			NASA DATA: BASELINE [] NEW [X]						
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1460 DIODE										
LEAD ANALYST:	D. HAR	(AMT	1								
ASSESSMENT:					CODE	PNC		CIL			
CRITICALITY REDUNDANCY SCREENS CIL ITEM											
FLIGH HDW/FU	inc Jnc	A		В		C	!				
NASA [3 /3 IOA [3 /3]	[]	[[]	((]]] *		
COMPARE [/		ĺ	3	[1	ſ]	[]		
RECOMMENDATIONS	: (If	dif	ferer	it fi	com N	ASA)					
	R]				Ρ]		P]	[(ADD/I] DELETE)		
* CIL RETENTION	RATION	IALE	: (If	app	licab	ole) IN	ADEQUA'	TE []		
REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATION.											
ISSUE NOT RESO	LVED AT	MEE	TING	WITH	subs	SYST	em mana	AGER ON	1/20/88.		

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1461 NASA FMEA #: 05-6KA-2269-2												N	iasa Bas	DAT ELIN NE	'A: 'E ['W []
SUBSYST MDAC ID ITEM:	EM:			14	RCS 161 TODE									.,,	" [Α]	l
LEAD AN	ALY	ST	:	D.	HART	'MA	N										
ASSESSM	ENT	:															
		FI	CAL	T		R	EDU	NDAI	1CY	sc	REEN	s			CI	_	
	r	1DW	/FU	NC		A			В	,		С			IT:	EM	
NASA IOA		3	/1R /3]]	P]]	P]	[P]		[]	*
COMPARE	[/N]	£	N]	[N]		N			[)	
RECOMMEN	DAT	IO	NS:	((If di	iff	ere	nt	fr	om 1	NASA))					
	[/	-	[]	_]	Į.]	(Al	[DD/D] ELE	TE)
* CIL RE	ren'	TIC	ON R	ITA	ONALE	:	(If	apj	pli	cak	ole)						•
REMARKS: IOA AGREI												ADI	EQUA EQUA	TE TE	[]	

ASSESSMI ASSESSMI NASA FMI	II		ARCS	-1462	}			ì	IASA 1 BASE1		[]	
SUBSYSTI MDAC ID ITEM:				ARCS 1462 DIOD									
LEAD AN	ALY	ST	:										
ASSESSM	ENT	:											
	CR			LITY	F	REDUN	DANCY	SCR	EENS			CI:	
	FLIGHT HDW/FUNC					\	F	3	(2		11.	£M
NASA IOA	[3	/]	[]	[]	[]		[] *]
COMPARE	[N	/N]	[]	[]	[]		[]
RECOMME	NDA	TI	ons:	. (1	f di	fere	nt fi	om N	ASA)				
	[/]	[]	C]	[]	(Al] DELETE)
* CIL R	ETE	NT:	ION	RATIO	NALE:	: (If	app]	licab	i	ADEQU ADEQU		[]
REMARKS AFT MAN IN CIRC	IFO			OLATIC SEE AS	N VAI	LVE #	5 RE-	-anai Arcs	YZED 1200	BY I 1X-12	OA DI 075X	UE	TO CHANGI

ASSESSME ASSESSME NASA FME	NT	I		ARCS-	-1463	3		NASA DATA: BASELINE [] NEW []						
SUBSYSTE MDAC ID:				ARCS 1463 DIODE	2									
LEAD ANA	LY	ST	:											
ASSESSME	NT	:												
	CR:		ICAL LIGH	ITY	I	REDUN	DANCY	SCI	REENS			CI		
	1			NC	7	4	В		C			ITI	SM	
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	'DA!	ri(ons:	(If	dif	fere	nt fr	om N	NASA)					
	[/]	[]	[]	[]	(Al	[DD/I) DELE	TE)
* CIL RE	TE	NT:	ION	RATION	ALE:	(If	appl:	icab	A	DEQUA]	
REMARKS: AFT MANI IN CIRCU	FOI	LD RY		LATION EE ASS					LYZED	BY I	DA DU	JE 1	, ,	HANGE

ASSESSMENT ASSESSMENT NASA FMEA	ARCS-1	464					ASA DATA: BASELINE NEW	[]		
SUBSYSTEM: MDAC ID: ITEM:	:		ARCS 1464 DIODE								
LEAD ANALY	YST	:									
ASSESSMEN'	T:										
C		ICAL		R	EDUND	ANCY	SCREE	ns		CIL	
		LIGH W/FU		A		В		C	2		
NASA IOA	[[3	/3]	[]	[]	[]	[[] *]
COMPARE	[N	/N	1	[]	ĺ]	[1	[]
RECOMMEND	ATI	ons:	(If	dif	feren	t fr	om NAS	SA)			
	[/]	[]	ĺ]	[] (A	[DD/I] DELETE)
* CIL RET	ENT	CION	RATION	ALE:	(If	appl	icable	4	ADEQUATE ADEQUATE	[]
REMARKS: AFT MANIF IN CIRCUI			OLATION SEE ASS	VAI ESSM	VE #5 ENT I	RE-	ANALY: RCS 1:	ZED 200	BY IOA D 1X-12075X	UE :	ro changi

ASSESSMENT DATA ASSESSMENT ID: NASA FMEA #:		465		NASA DA BASELI 1	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1465 DIODE				
LEAD ANALYST:					
ASSESSMENT:					
CRITIC	ALITY GHT	REDUND	ANCY SC	REENS	CIL
	FUNC	A	В	С	ITEM
NASA [/ IOA [3 /	3] [[]	[]	[]	[] *
COMPARE [N /	и ј	[]	[]	[]	[]
RECOMMENDATION	S: (If d	lifferen	t from 1	NASA)	
[/] []	[]	[]	[] (ADD/DELETE)
* CIL RETENTION REMARKS:	N RATIONAI	E: (If a	applicak	ole) ADEQUAT INADEQUAT	
AFT MANIFOLD IS IN CIRCUITRY.	SOLATION V SEE ASSES	ALVE #5	RE-ANAI Os ARCS	YZED BY IOA 12001X-1207	DUE TO CHANGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1466	NASA DATA BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1466 DIODE		
LEAD ANALYST:			
ASSESSMENT:			CIL
CRITICA FLIG		NCY SCREENS	ITEM
HDW/F		В С	
NASA [/ IOA [3 /2] [] R] [F]	[] [] [P] [P]	[x]
COMPARE [N /N	1	[N] [N]	[N]
RECOMMENDATIONS	: (If different	from NASA)	
] []	r i f l	[] (ADD/DELETE)
* CIL RETENTION	N RATIONALE: (If	applicable) ADEQUATI INADEQUATI	
REMARKS: AFT MANIFOLD I IN CIRCUITRY.	SOLATION VALVE #5 SEE ASSESSMENT I	RE-ANALYZED BY IOA Ds ARCS 12001X-1207	DUE TO CHANGE 5X.

NASA FMEA #: SUBSYSTEM: ARCS						RCS-1467						NASA DATA: BASELINE [] NEW []				
SUBSYST MDAC ID ITEM:		•		ARC 146 DIO	7							•	,			
LEAD AN	ALY	S1	?:													
ASSESSM	ENT	:														
		F	LIG		:	REDU	NDANC	Y SC	REENS			CII	<u>.</u>			
		HD	W/F	JNC	1	A B			(С		ITE	EM			
NASA IOA	[3	W/FUNC /] [/3] []	[]	[]		[]	*		
COMPARE	[N	/N	J	[]	[3	[]	l	[)			
RECOMMEN	DA'	CIC	ONS:	(I	f dif	fere	nt fr	om N	IASA)							
	[]	[]	[J	[1] (ADD	/DI] ELET	'E'I		
* CIL RE	ren	TI	ON :	RATIO	NALE:	(If	appl	icab	le)					-,		
REMARKS:									A INA	DEQUAT: DEQUAT:	ΕÌ]			
AFT MANII IN CIRCUI	TR	Y.	SI	EE ASS	ESSMI	ENT]	IDs AI	RCS	YZED 1 12001	BY IOA X-12075	DUE	TC) CH	ANGE		

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SUBSYSTEM MDAC ID:	M:			ARCS 1468 DIODE	}									
LEAD ANA	LYS	T:												
ASSESSME	NT:	;												
	CR1			ITY	R	EDUNI	DANCY	SCR	EENS			CII		
	ŀ		JIGH V/FU		A		E	3	c	:				
NASA IOA	[[3	/3]	[]	[]	[[]		[] *]	
COMPARE	ĺ	N	/N]	[]	[]	[1		[]	
RECOMMEN	IDA'	TI(ons:	(I:	f dif	fere	nt fi	com N	IASA)					
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* CIL RI	ETE	NT	ION	RATIO	NALE	: (If	app	licab		ADEQU ADEQU]	
REMARKS:	T EO	LD	ISC	OLATIO SEE AS	n VAI SESSI	LVE # MENT	5 RE	-ANAI ARCS	LYZED 1200	BY I 1X-12	OA I	UE (.	TO CHAI	1GI

ASSESSMENT DATE: ASSESSMENT ID: ARCS-1469 NASA FMEA #:										NASA BASI	ELIN]	
SUBSYST MDAC ID ITEM:				ARC: 1469 DIO	9								-	
LEAD AN	ALY	ST	·											
ASSESSM	ENT	:												
	CR		ICA LIG	LITY	:	REDUN	IDANC'	Y SCF	REENS			CI		
	,	HD	W/F	UNC		A	1	В	(С		IT:	EM	
NASA IOA	[3	/ /3]]]]]	[]		[] *]	
COMPARE	[N	/N]	[]	[]	[)		[]	
RECOMMEN	IDA'	ric	ONS	: (I	f di	ffere	nt fr	om N	ASA)					
	[/]	[]	[]	[]	(A	[DD/[] ELETI	Ξ)
* CIL RE	TEN	1T]	ION	RATIO	NALE:	(If	appl	icab	le)					
REMARKS:									INA	DEQUA	ATE	[[]	
AFT MANI IN CIRCU	FOI ITF	ZY.	ISC	DLATION SEE AS	N VAI SESSM	VE #	5 RE- IDs A	ANAL RCS	YZED 12001	BY IC) 75X	JE I	о сна	NGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1	470				NA B	SA DA ASELI N	TA: NE [IEW []	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1470 DIODE									
LEAD ANALYST:										
ASSESSMENT:								C]	т.	
CRITICAL		R	EDUND	ANCY	SCRI	EENS			EM	
FLIGI HDW/F		A		E	,	С				
NASA [/ IOA [3 /3	_	[[]	[]]]	[]	*
COMPARE [N /N		[3	ξ]	[]	[3	
	· (Tf	ai:	ffere	nt f	rom N	ASA)				
RECOMMENDATIONS	-]			[1] (ADE)/DEI	LETE)
* CIL RETENTION	RATIO	NALE	: (If	app	lical	ole) IN	ADEQU ADEQU	ATE ATE]
REMARKS: AFT MANIFOLD I IN CIRCUITRY.	SOLATIO SEE AS	n VA Sess	LVE #	5 RE IDs	-ANA ARCS	LYZED 1200	BY I 1X-12	OA DU	E TO	CHANGE

ASSESSI ASSESSI NASA FI	Œ	ΝŢ	<u>ר</u> :	ID:		CS-14	71				NASA BAS	ELIN]	
SUBSYST MDAC ID ITEM:					AR 14 DI							ME	, w]	
LEAD AN	ΑI	Y	SI	?:											
ASSESSM	EN	T	:												
	С		F	LIG			REDU	NDANC	Y SC	REENS			CI	L	
		F	HD	W/F	UNC		A	:	В		С		IT:	EM	
NASA IOA		[3	/3]	[]]]	[]		[]	*
COMPARE				/N		[]	ι]	ι]		[]	
RECOMMEN	DA	lΤ	ΊC	ons:	(If dif	fere	nt fr	om N	(ASA)					
	[/]	[]	[]	[]	(A)	[DD/D] ELET	ישי
* CIL RE	ΓE	N'	ΓI	ON	RATIC	NALE:	(If	appl	icab:	le)		•	, -		Δ)
REMARKS:										A INA	DEQUA DEQUA	TE]]	
AFT MANIE	[T]	LI RY) (ISO S	LATIO EE AS	N VAL	VE #5 ENT]	RE-A	ANAL)	ZED 12001:	BY IO	A DU 75X.	E T) CH	Ange

ASSESSM ASSESSM NASA FM	ENT	ID:	ARCS-	-1472	? ?06 - 1			1	NASA BASE	LINE	-	x]	
SUBSYST MDAC ID ITEM:			ARCS 1472 DRIVE	IR, H	IYBRI	D							
LEAD AN	ALYS'	r:	D. HA	RTMA	N								
ASSESSM	ENT:												
		TICAL FLIGH	ITY	R	EDUN	DANC	SCF	REENS			CII		
			NC	A		F	3	C	2		ITE	M	
NASA IOA	[3	3 /3 3 /3]	[]	[]	[]		[] *	
COMPARE	[/]	[]	[]	C]		[]	
RECOMMEN	NDATI	ons:	(If	dif	fere	nt fr	om N	ASA)					
	[3	3 /2R]	[P]	[P]	[F)	(AI	[D/D] ELET	E)
* CIL RE	ETENT	ION I	RATION	ALE:	(If	appl	icab	A	.DEQUA .DEQUA		[]	
REMARKS: THIS FAI POSITION	LURE	MAY EDUNI	CAUSE DANCY	LOS:	S OF	ACCU LO	RATE SS O	INDT	САТТО	N OF	י יישריי	J E VAI MAY J	LVE LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

OPERATIONS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-147	3 206 - 2				SA DATA: ASELINE NEW]
	ARCS 1473 DRIVER,	HYBRID						
LEAD ANALYST:	D. HARTM	IAN						
ASSESSMENT:								
CRITICAL		REDUNDA	ANCY	SCREE	ns		CIL	ví
FLIGH HDW/FU		A	В		С			
NASA [3 /3 IOA [3 /3] []	[[]	[]	[] *]
COMPARE [/] []	(]	[]	[]
RECOMMENDATIONS:	(If di	ifferen	t fr	om NAS	SA)			
[3 /2F	[P]	[P]	[P] (A	DD/D] ELETE)
* CIL RETENTION	RATIONALI	E: (If	appl	icable	A.	DEQUATE DEQUATE]
REMARKS: THIS FAILURE MAY POSITION. REDUI	CAUSE LO	OSS OF	ACCU LO	RATE :	INDI ALL	CATION C	F TH	E VALVI MAY LEA

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:						NA: B	SA DATA: ASELINE NEW	; [x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1474 DRIVER	, нч	BRID						
LEAD ANALYST:	D. HAR	TMAN	Ī						
ASSESSMENT:								CIL	
CRITICA		RF	EDUNDA	MCA	SCREE	NS		ITE	
FLIG HDW/F	UNC T'	A		В		С			
NASA [3 /3 IOA [3 /3]	[]	[[]	[]	[] *
COMPARE [/			1		3		1	[1
RECOMMENDATIONS	: (If	dif	feren	t fr	om NAS	SA)			
	2R])] ([ADD/I) DELETE)
* CIL RETENTION	N RATION	ALE:	(If	app]	licabl	e) INI	ADEQUATE ADEQUATE	[]
REMARKS: THIS FAILURE M POSITION. RED TO FALSELY FAI OPERATIONS.	AY CAUSE UNDANCY LING THE	LOS PROV VA	SS OF VIDED LVE C	ACCI LOSE	URATE OSS OF D, POS	IND:	ICATION L REDUNI LY EFFEC	OF T ANCY TING	HE VALVE MAY LEAD MISSION
			mTNC	ಚಾಗುಚ	SUBSY	/STE	M MANAGI	ER ON	1/20/88.

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM:	EN' EA EM:	#:	ID:	ARC 05- ARC 147	S-147 6KA-2 S 5 VER,]	HYBR				NASA DA BASELI N	NE [x]	
ASSESSMI			•	υ. 1	TAKT.M7	AN							
		F	LIGH	ITY T NC	_				CREENS			IL Pem	
							E		C				
NASA IOA]	3 3	/3 /3]	[]]	[]	[]	[]	*
COMPARE	[/]]			[[]	
RECOMMEN	DAI	ľIC	ons:	(I	f dif	fere	nt fr	om	NASA)				
]					[P		[ADD/] DELE:	ΓE)
* CIL RET	ren	TI	ON F	OITAS	VALE:	(If	appl	ica	hlei				· ·
REMARKS:									AC INAC	EQUATE EQUATE	ī]	
THIS FAIR POSITION. TO FALSER OPERATION	JUR JY JS.	E RE FA	MAY DUND ILIN	CAUSE ANCY G THE	LOSS PROVI VALV	OF DED E CI	ACCUF LOSED,	TAS SS P	E INDIC OF ALL OSSIBLY	ATION C REDUNDA EFFECT	F TH NCY 'ING	HE VA MAY MISS	LVE LEAD

ASSESSMEN ASSESSMEN NASA FMEA	TI	D:		: 1/29/88 NASA DATA: ARCS-1476 BASELINE [05-6KA-2207A-1 NEW [ARCS 1476]
SUBSYSTEM MDAC ID:					, ну	BRID						
LEAD ANAI	LYS	Г:		D. HAR	TMAN							
ASSESSME	YT:											
•			CALI		RE	DUNDA	MCA	SCREE	ENS		CIL	
			IGHI /FUN		A		В		С			
NASA IOA	[3	/3 /3	1	[]	[]	[]	[] *]
COMPARE	[/	3	[]	[]	[]	[]
RECOMMEN	TAD	יוכ	ons:	(If	dif:	feren	t fr	om NA	SA)			
	ſ	3	/2R	1	[P	1	[P]	[P	(2	[ADD/D] ELETE)
* CIL RE	ETEN	T:	ION	RATION.	ALE:	(If	appl	icabl		DEQUATE]
REMARKS: THIS FAI POSITION TO FALSI OPERATION	M. ELY	R F	MAY EDUN AILI	CAUSE DANCY NG THE	LOS PROV VAI	S OF IDED. VE CI	ACCU LOSEI	RATE SS OF , POS	INDI F ALI SSIBI	CATION (REDUND)	OF TH ANCY TING	HE VALVE MAY LEAD MISSION

ASSESSM ASSESSM NASA FM	ENT ENT EA	1 1 1 1 # 1	DATE ID:	1/29 ARCS 05-6	/88 -147 KA-2	7 207A	-1		1	NASA DAT BASELIN NE			
SUBSYST MDAC ID ITEM:	EM:			ARCS 1477 DRIV	ER, 1	HYBR	ID				-	•	
LEAD AN	ALY	SI	?:	D. H	ARTM	AN							
ASSESSMI	ENT	:											
	CR		ICAL LIGH	ITY T	F	REDUI	NDANCY	sci	REENS		CI	_	
]			NC	A	1	E	3	c	!	IT	EM	
NASA IOA	[[3 3	/3 /3]	[[]	[]]]	[]	*
COMPARE	[/]	[]	[J	[]	ĺ]	
RECOMMEN	DA'I	CIC	ONS:	(If	dif	fere	nt fr	om N	ASA)				
]	•				[P		[.DD/[] DELE	TE)
* CIL RE	TEN	T]	ON F	RATION	ALE:	(If	appl	icab					
REMARKS:		_							INAI	EQUATE EQUATE	į		
THIS FAIR POSITION TO FALSE OPERATION	LUR Ly NS.	E RE FA	MAY DUND	CAUSE PANCY I	LOSS PROVI VALV	OF DED ECI	ACCUI LOS LOSED,	RATE SS 01 POS	INDIC F ALL SSIBLY	ATION O REDUNDA EFFECT	F TH NCY ING	E VA MAY MISS	LEAI LEAI

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1478 05-6KA-2207-1	NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1478 DRIVER, HYBRID		
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:		_	CIL
CRITICAL		CY SCREENS	ITEM
FLIGH HDW/FU		ВС	
NASA [2 /1F IOA [3 /3	[P] [P] [F] [P]] []	[X] *
COMPARE [N /N] [N] [[N] [N]	[N]
RECOMMENDATIONS	: (If different	from NASA)	
	R] [P]	[P] [P] (#	[D] ADD/DELETE)
* CIL RETENTION	RATIONALE: (If a	pplicable) ADEQUATE INADEQUATE	[]
LOSS OF ACCURAT	E INDICATION OF I	LURES. THIS FAILURING HE VALVE POSITION. Y MAY LEAD TO FALSE: MISSION OPERATIONS	LY FAILING TH

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFOR, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM:	ent Ea Em:	[] #:	ID:		ARCS 05-6 ARCS 1479 DRIVI	-14 KA-	479 -22 H	IYB					N	VASA DA BASELI N	NE	[х <u>ј</u>		
LEAD ANA					D. H2	ART	MA	N											
THEELOCIA																			
	CR		ICA LIG		TY		R	EDI	UNDAN	CY	sc	REEN	S			CII	-		
]	HD	W/F	UN	С		A			В			С			ITE	M		
NASA IOA		3 2	/11 /2	R]]	P]]	F]	[P]	İ	[X]	*	
COMPARE	[N	/N	•]	[N]	[N]	[N	1]		
RECOMMEN	DAI	'IC	ons:	:	(If	đi	Ĺfí	fer	ent i	fro	m]	NASA)							
	[3	/3]		[]	[]	[j (] ADD	D /DI] ELE	re)	
* CIL RET	CEN	TI	ON	RA	TION	LE	:	(I	f app	li	cak	ole)		·		, -		,	
REMARKS:												IN	AD:	EQUATE EQUATE	[]		
NASA FMEA LOSS OF A PROVIDED. VALVE CLO		LO:	SS (L TO	NDICA	TI	ON	01	F THE	V.	ALV	E PO	SI	FAILURI FION. FALSEI ATIONS.	RE				Ε

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFOR, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1480 05-6KA-2219-	·1	NASA DATA BASELINE NEW	: [] [x]
	ARCS 1480 DRIVER, HYBE			
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL FLIGH		INDANCY SCREEN	S	CIL ITEM
	NC A	В	С	
NASA [2 /1R IOA [3 /3] [P]] []	[F] [[] [P]	[X] *
COMPARE [N /N] [N]	[N] [и]	[N]
RECOMMENDATIONS:	(If differ	cent from NASA)	
[3 /2R] [P]	[P] [[D] DD/DELETE)
* CIL RETENTION	RATIONALE: ([f applicable)		
		ı	ADEQUATE NADEQUATE	
REMARKS: NASA FMEA CONSIDER LOSS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, PO	INDICATION (OF ALL REDUNI	FAILURES. TH OF THE VALVE P DANCY MAY LEAD	IS FAILURE OSITION. TO FALSEL	MAY CAUSE REDUNDANCY
AT MEETING WITH DISCUSSED. IT W	SUBSYSTEM MAI	NAGER ON 1/20/ ON THAT THE IS	88, NSTS 2 SUE (MULTI	2206 WAS PLE FAILURES)

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1481		NASA DATA BASELINE NEW	-
	ARCS 1481 DRIVER, HYBRID			
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL: FLIGHT		ANCY SCREE	CNS	CIL ITEM
HDW/FU	NC A	В	С	
NASA [3 /1R IOA [2 /2] [P]] []	[F] []	[P] []	[X] * [X]
COMPARE [N /N] [N]	[N]	[и]	[]
RECOMMENDATIONS:	(If different	t from NAS	A)	
[3 /3] []	[]	[]	[D] DD/DELETE)
* CIL RETENTION I	RATIONALE: (If a	applicable	ADEQUATE	[]
REMARKS: NASA FMEA CONTAIN EFFECT.	NS MULTIPLE FAIR	LURES. TH	~	ALONE HAS NO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FMEA	T	ID:	:	1/29/ ARCS- 05-6K	1482	07 A- 1			_		DATA: LINE NEW	[
SUBSYSTEM MDAC ID:				ARCS 1482 DRIVE	R, H	YBRID)							
LEAD ANA	LYS	T:		D. HA	RTMA	N								
ASSESSME														
(CRI			ΙΤΥ	R	EDUNI	DANCY	SCR	EENS			CIL		
	ŀ		JGH' /FU		A		E	3	C					
NASA IOA	[3	/3 /3]	[[]	[[]	[]		[]	*
COMPARE	[/]		1				[]	
RECOMMEN	DA'	TIC	ons:	(I	f di	ffere	nt fi	com 1	NASA)					
	ι	3	/2R	.]	[]	P]	[]	P]	[]	?]	(A	[.DD/[ETE)
* CIL RE	ETE	NT:	ION	RATIC	NALE	: (If	app	lica		ADEQI ADEQI	UATE UATE	[]	
REMARKS: THIS FAI POSITION TO FALSE OPERATION	M. Ely	R F	MAY EDUI	CAUS	E LO PRO IE VA	SS OF VIDED LVE O	ACC L CLOSE	URAT OSS D, P	E IND OF AL	ICAT L RE LY E	ION C DUNDA FFECT	OF TH ANCY TING	HE V MA' MI	VALVE Y LEAD SSION

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: LEAD AND	ENT EA EM: :	; ; st	ID:	ARC 05- ARC 148 DRI	S-1483 6KA-22 S 3 VER, H	IYBR					A DAT. SELIN: NE	E [x]	
	CR	ΙT	ICAL	ΙΤΥ	R	ווזרואי	MDANC	יע כעי	Denv	_				
		F.	LIGH	\mathbf{T}			M DAMA (CREENS	S		CI	L EM	
	,	עה	w/FU	NC	A			В		С				
NASA IOA		3	/3 /3]	[[]]]	[[]		[]	*
COMPARE	[/]	[]	ſ]	[]		[]	
RECOMMEN	DAT	PI.	ONS:	(1	f dif	fere	nt f	rom	NASA)					
	[3	/2R]	[P]	[P]	[Ρj	(A)	[DD/1] DELE:	TE)
* CIL RE	TEN	T]	ON I	RATIO	NALE:	(If	app	lica	ble)					
REMARKS:									INZ	ADEQU ADEQU	ATE	į		
THIS FAIR POSITION TO FALSE OPERATION														

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	3000 1404	07-1		ASA DATA BASELINE NEW	_
SUBSYSTEM:	ARCS 1484 DRIVER, H				
LEAD ANALYST:	D. HARTMA	N			
ASSESSMENT:					
CRITICALI FLIGHT		EDUNDANCY	SCREENS		CIL
HDW/FUN		В	c		ITEM
NASA [2 /1R IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [N /N] [N] [N] [N]	[и]
RECOMMENDATIONS:	(If dif:	ferent fr	om NASA)		
[3 /2R] [P] [P] [P		[D] DD/DELETE)
* CIL RETENTION R	ATIONALE:	(If appl	•		_
				DEQUATE DEQUATE	[]
REMARKS: NASA FMEA CONSIDE LOSS OF ACCURATE PROVIDED. LOSS O VALVE CLOSED, POS	INDICATION F ALL REDU	N OF THE Y	VALVE POS	ITION. R O FALSELY	MAY CAUSE EDUNDANCY FAILING THE

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEI ASSESSMEI NASA FME	ТN	II		1/ AR 05	29/8 CS-1 -6KA	8 48 -2	35 220	7-2						SA DA BASELI		[]		
SUBSYSTEM MDAC ID:				AR 14	CS															
LEAD ANA	LYS	ST	:	D.	HAR	T	IAN	ī												
ASSESSME	ASSESSMENT: ODITICALITY PEDUNDANCY SCREENS CIL																			
CRITICALITY REDUNDANCY SCREENS CIL ITEM																				
	1			_			A			В			С				. 141	•		
NASA IOA	[3	/1R /2]		[P]	[F]	[[P]		[X X]	*	
COMPARE	[N	/N]		[N	3	[N]	[N]		[]		
RECOMMEN	DA'	ΤI	ons:		(If	đ	if	fere	nt :	fro	om i	nasa))							
	[3	/3]		[3	[]	ί]	(A		D DI		TE)	
* CIL RE	TE	NT	ION	RAT	TION	AL	E:	(If	ap	pl:	ica			DEQUA'		[]		
REMARKS: NASA FME LOSS OF PROVIDED VALVE CI	A AC	CU L	RATE OSS	II OF	NDIC: ALL	AT R	IO ED	N OF UNDA	TH:	E '	VAL AY	VE P	OS:	O FAL	SEL	REI Y 1	וטכ	NDA	NCY	

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-140	90		NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1486 DRIVER,	HYBRID			
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICAL	LITY	REDUNDA	NCY SCREE	NS	CIL ITEM
FLIGH	IT JNC		В	С	
NASA [2 /1] IOA [3 /3	R] [P]	[F] []	•	[X] * []
COMPARE [N /N					[и]
RECOMMENDATIONS	: (If o	different	from NAS	A)	
[3 /2	R]	[P]	[P]	[P]	[D] ADD/DELETE)
* CIL RETENTION	RATIONA	LE: (If a	applicable	e) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSI LOSS OF ACCURAT PROVIDED. LOSS VALVE CLOSED,	LE INDICA	DEDUNDAN	CV MAV LE	AD TO FALSE	LY FAILING THE
AT MEETING WIT	H SUBSYST	TEM MANAGED UPON	ER ON 1/2 THAT THE ERPRETATI	0/88, NSTS ISSUE (MULT ONS OF NSTS	22206 WAS TIPLE FAILURES) 22206.

THEREFORE, THIS ISSUE REMAINS OPEN.

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

ASSESSMI ASSESSMI NASA FMI SUBSYSTI	ent Ea	#:	[D:	ARCS 05-6	-14 KA-:	87 221	9-2					IASA D. BASEL		[]	
MDAC ID:				ARCS 1487 DRIV		НУ	BRID									
LEAD ANA	LY	ST	':	D. H	ARTM	IAN										
ASSESSME	ENT	:														
	CR		ICAL LIGH	ITY T		RE	DUNDAN	CY	S	CREENS	3			CIL		
			W/FU	_		A		В			С			ITE	M	
NASA IOA]	3 2	/1R /2]	[P]	ן <u>[</u>	F]	[P]		(X (X] *	
COMPARE	[N	/N]	[]	N]	[N]	ί	N]]	
RECOMMEN	DAI	CIC	ons:	(If	di	ffe	rent	fro	m	NASA)						
			/3		[)	•			ε		נ] ADE	D DE] LET	Ε)
* CIL RET	ľEN	TI	ON F	RATION	ALE:	(If app	oli	ca		יט ע	EQUATE	, .		_	
REMARKS:	. ~	~ 1-		. _						IN	AD	EQUATE	: []	
NASA FMEA EFFECT.	C	ON	TAIN	s Mul	ripi	E]	FAILUF	ES	•	THIS	F	AILURE	AL	ONE	HAS	NO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT]	ID:	1/29/8 ARCS-1 05-6KA	1488	L7 - 1				ASA DATA BASELINE NEW]
SUBSYSTE MDAC ID: ITEM:			ARCS 1488 DRIVE	R, H	/BRID)					
LEAD ANA	LYSI	r:	D. HAI	RTMAN	1						
ASSESSME	NT:										
		rical: Flight		RI	EDUNI	DANCY	SCRE	ENS		CIL	
		OW/FUI		A		В		С		115	M.
NASA IOA	[3	3 /3 3 /3]	[]	[]	[]	[[] *
COMPARE	[/]	[]	[]	[]	[]
RECOMMEN	DAT:	ions:	(If	difi	ferer	nt fro	om NA	SA)			
	[3	3 /2R]	[P]	[P]	[P		[DD/D:] ELETE)
* CIL RE	TENT	rion i	RATION	ALE:	(If	appl:	icable	A	DEQUATE DEQUATE	[]
REMARKS:										-	

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT	II):	ARCS-	1489			1	NASA DAT BASELIN NE]	
SUBSYSTE MDAC ID:	M:			ARCS 1489 DRIVE	R, H	YBRII)					
LEAD ANA	LY:	ST	:	D. HA	RTMA	N						
ASSESSME	NT	:										
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM												
		W/FU	_	A	B	1	(c	TIE	M		
NASA IOA	[3	/3 /3]	[]	[]	[]	[] *
COMPARE	[/]	[]	[]	[]	[]
RECOMMEN	'DA'	ΓΙ	ons:	(If	dif	ferer	nt fr	om N	IASA)			
	[3	/2R]	[P	']	[P)	[]		[ADD/I] DELETE)
* CIL RE	TE	NT:	ION	RATION	ALE:	(If	appl	icab	1	ADEQUATE ADEQUATE]
THIS FAI	LU	RE	MAY	CAUSE	LOS	s of	ACCU	RATE	IND	CATION	OF TH	E VALVE

POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ASSESSMEN ASSESSMEN NASA FMEA	1T	ΙD	TE:	1/29/8 ARCS-1 05-6KA	490	7-1				SA DATA: ASELINE NEW]	
SUBSYSTEM MDAC ID:				ARCS 1490 DRIVER	е, ну	BRID							
LEAD ANA	LYS	T:		D. HAF	(AMT)	ī							
ASSESSME	NT:	;											
CRITICALITY REDUNDANCY SCREENS CIL ITEM													
	I			nc nc	A		В		С				
NASA IOA	[3	/3 /3]	[]	[]]	[]	[]	*
COMPARE			/		[1	[]	[3	[]	
RECOMMEN	IDA'	TI	ONS:	(If	dif	feren	t fr	om NA	5A)				
			/2F			1			[P] (2	[ADD/I) EL	ETE)
* CIL RE	ETE	NT	ION	RATION	ALE:	(If	appl	icabl	n	DEQUATE]	
REMARKS: THIS FAI POSITION TO FALS	[LU	_		*********	DDA	, , , , , , , ,		155 UF	~ Lu				

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMI ASSESSMI NASA FMI	ENT ENT EA	: [: #:	DATE:	1 A	/29/8 RCS-1 5-6K/	38 L49 A-2	1 217-	2				N	ASA BASE	LINE] :) X]		
SUBSYSTI MDAC ID: ITEM:	urı.			1	RCS 491 RIVEF													
LEAD ANA	YLY	SI	':	D.	. HAF	TM	AN											
ASSESSME	ENT	:																
	CR		ICAL LIGH		ľ]	REDUN	IDAN	CY	S	CREEN	s			CI	_		
	;	HD	W/FU	NC		7	A		В	ı		С			IT	LM		
NASA IOA	[3 3	/3 /3]		[]	[]	[]		[]	*	
COMPARE	[/]		[]	[]	[]		[]		
RECOMMEN	DA?	ri	ONS:		(If	dif	fere	nt :	fr	om	NASA)						
			/2R								[P] .	(AI] DELE	TE)
* CIL RE	TEN	T)	ON F	TAS	IONA	LE:	(If	app	1	ica	ble)							
REMARKS:												NAC	EQUA:	ΓE		,		
THIS FAIR POSITION TO FALSE OPERATION	ĽΥ	L	THOOR	MIN	LY PE	w	1 1 1 1 1 1 1 3	T	Δc		וג סר	• т	DEDIN					

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-149)2 !217-1				SA DATA: ASELINE NEW]				
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1492 DRIVER,	HYBRID										
LEAD ANALYST:	D. HARTI	IAN										
ASSESSMENT:												
CRITICALITY REDUNDANCY SCREENS CIL ITEM												
HDW/FU		A	В		С							
NASA [3 /3 IOA [3 /3] []	[[]	[]	[] *				
COMPARE [/] []	[]	[]	[]				
RECOMMENDATIONS:	(If d	ifferen	t fro	om NAS	A)							
[3 /2R] [P]	[P]	[P] (A	[DD/D:] ELETE)				
* CIL RETENTION	RATIONAL	E: (If	appl:	icable	Al	DEQUATE DEQUATE	[]				
REMARKS: THIS FAILURE MAY POSITION. REDUN TO FALSELY FAILI OPERATIONS.	さいかいしん ロロ	OUTDED.	T.O.	SS OF	ALL	REDUNDA	NCI .	MWI TRUD				

ASSESSM ASSESSM NASA FM SUBSYST	ENT EA	*] #:	ID:	ARCS 05-6	/88 -149 KA-2	3 217-2	2		NASA BASE		[x]	
MDAC ID	EM:			ARCS 1493 DRIV									
LEAD AND	ALY	SI	':	D. H	ARTM	AN							
ASSESSMI	ENT	:											
	CR		ICAL LIGH	ITY T		REDUN	DANCY	sc	CREENS		CI	_	
	1	HD	W/FU	NC	į	A	В	}	С		IT	EM	
NASA IOA	[3 3	/3 /3]	[[]	[[]	[] []		[] *]	
COMPARE	[/		[]	C]	[]		[]	
RECOMMEN	DA'I	CIO	ONS:	(If	dii	fere	nt fr	om :	NASA)				
			/2R		[]				[P]		[D/[] ELETE	E)
* CIL RE	TEN	T)	ON I	RATION	ALE:	(If	appl	ical					
REMARKS:									ADEQUA' INADEQUA	TE	[]	
	•		JUUNL		PRUV	1 1 1 M 1 1	1.70	?C /	E INDICATION OF ALL REDUN OSSIBLY EFF				

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT ID:	1/29/88 ARCS-1494 05-6KA-22					ASA DATA BASELINE NEW]			
SUBSYSTE MDAC ID: ITEM:	M:	ARCS 1494 DRIVER, H	HYBRID)								
LEAD ANA	LYST:	D. HARTMA	7N									
ASSESSME	NT:											
	CRITICAL FLIGH		REDUND	ANCY	SCRE	ENS		CIL				
	HDW/FU		A	В		С		A 444 C				
NASA IOA	[3 /3] []	[[]	[]	[] *			
COMPARE	[/] []	[]	[1	[]			
RECOMMEN	DATIONS:	(If di	fferen	ıt fro	m NAS	SA)						
	[3 /2R	. [1	?]	[P]	[P] .DD/D] ELETE)			
* CIL RE	TENTION	RATIONALE:	(If	appli	cable	A	DEQUATE DEQUATE]			
VERHVVO.												

THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ASSESSME ASSESSME NASA FME	ATE:	1/29/ ARCS- 05-6K	88 1495 A-22	17-2				ASA DATA BASELINE NEW					
SUBSYSTE MDAC ID:				ARCS 1495 DRIVE	R, H	YBRID)						
LEAD ANA	LYS	ST	:	D. HA	RTMA	N							
ASSESSME	NT:	:											
	CRI			ITY	R	EDUND	ANCY	SCRI	EENS		CII		
FLIGHT HDW/FUNC							В		С		111	511	
NASA IOA]	3 3	/3 /3]	[[]	[]	[[]]]	*
COMPARE	[/]	[]	[]	[]	[]	
RECOMMEN	DA'	rio	ons:	(If	dif	feren	t fr	om N	ASA)				
	[3	/2R]	[P]	[P]	[P		DD/I		
* CIL RE	TEI	T.	ION :	RATION	ALE:	(If	appl	icab	•	DEQUATE	r	ו	
										DEQUATE		j	
REMARKS: THIS FAI POSITION TO FALSE OPERATION	LUI LY	RI F	EDUN	DANCY	PROV	IDED.	LO	SS O	F ALL	REDUNDA	NCY	MA	LEAD

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	100cc=1144	UK D1102221 ()								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1496 DRIVER,	HYBRID								
LEAD ANALYST:	D. HARTI	IAN								
ASSESSMENT:										
CRITICAL	ITY	REDUNDAN	ICY SCREEN	IS	CIL ITEM					
FLIGH HDW/FU		A	В	С						
NASA [2 /1R IOA [3 /3] [P] [F]	[P] []	[X] * []					
COMPARE [N /N] [n]	[и]	[и]	[N]					
RECOMMENDATIONS:	(If d	ifferent	from NAS	A)						
[3 /2F	2] [P]	[P]	[P] (A	[D] .DD/DELETE)					
* CIL RETENTION	RATIONAL	E: (If a	pplicable) ADEQUATE INADEQUATE						
REMARKS: NASA FMEA CONSIDERS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, POR SERVICE PROVIDED.	E INDICAT	TON OF T	HE VALVE	D TO FALSEI	LY FAILING TH					

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM	SESSMENT DATE: 1/29/88 SESSMENT ID: ARCS-149 SA FMEA #: 05-6KA-								97 BAS								DATA: ELINE [] NEW [X]				
SUBSYST MDAC ID ITEM:				14	RCS 197 RIVER,	, н	YBI	RID										-			
LEAD ANALYST: D. HARTM																					
ASSESSMI	ENT	:																			
		Fl	ICAL LIGH	T	•	R	EDU	INDA	MC	CY	sc	REE	ıs				CIL				
	1	HDV	/FU	NC		A			В				(2		_	- 1 DM				
NASA IOA	_	3	/1R /3]	[P]]	P]	[I	?]]		[• :]	*		
COMPARE	[/N]	[N]		[N]	[N	1]		[•]			
RECOMMEN	[Adi	OI	NS:		(If d	ifi	fer	ent	f	ro	m]	NASA	.)								
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* CIL RE	TEN	ΤI	ON F	(TAS	CONAL	E:	(I	f a	pp.	li	cal	ole)									
REMARKS: IOA AGRE	ES	WI'	TH N	'As <i>i</i>	A FME	١.						I	A NA	DEQ DEQ	UATE UATE]]			

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #: SUBSYSTEM:	1/29/88 ARCS-1498 05-6KA-2208-1	-	NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1498 DRIVER, HYBRI			
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL FLIGH		NDANCY SCREE	ns	CIL ITEM
HDW/FU	NC A	В	С	
NASA [2 /1R IOA [3 /3	[P] []	[F] []	[P] []	[X] * []
COMPARE [N /N] [N]	[N]	[и]	[и]
RECOMMENDATIONS:	(If differ	ent from NAS	SA)	
[3 /21	R] [P]	[P]		[D] ADD/DELETE)
* CIL RETENTION	RATIONALE: (I	f applicable	e) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONSIDERS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, P.	E INDICATION O	DANCY MAY LE	AD TO FALSEI	LY FAILING THE
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE	**** * ********************************	INTERPRETATI	13301 (1101)	

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-14	99	2		A DATA: SELINE [] NEW [X]					
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1499 DRIVER,	HYBRI	:D				•			
LEAD ANALYST:	D. HART	MAN								
ASSESSMENT:										
CRITICAL FLIGH		REDUN	DANCY	SCRE	ENS		CIL			
HDW/FU	NC	A	В		С	ITEM				
NASA [3 /1R IOA [3 /1R] [P] P]	[P]	[P] [P]		[] * [X]			
COMPARE [/] []	[N]	[]		[N]			
RECOMMENDATIONS:	(If d	iffere	nt fr	om NA	SA)					
(/] · []	[]	[]		[] D/DELETE)		
* CIL RETENTION	RATIONALI	E: (If	appl	icabl						
REMARKS: IOA AGREES WITH 1	VASA FMEA	١.			ADEQUA INADEQUA]			

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-150	30		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1500 DRIVER,	HYBRID			·
LEAD ANALYST:	D. HARTI	MAN			
ASSESSMENT:					
CRITICAL	ITY.	REDUNDANC	Y SCREEN	S	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [2 /1H IOA [3 /3	R] [P] [F] [P]	[X] *
COMPARE [N /N				[и]	[и]
RECOMMENDATIONS	: (If d	different i	from NASA	A)	
[3 /2	R] [[12]	P]	[P] (A	D] DD/DELETE)
* CIL RETENTION	RATIONAL	LE: (If ap) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSI LOSS OF ACCURAT PROVIDED. LOSS VALVE CLOSED, F	E INDICA	DEDINDANCA	MAY LEA	D TO FALSE	LY FAILING THE
			ON 1/20	/88 NSTS	22206 WAS

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

SUBSYSTEM: ARCS MDAC ID: 1501 ITEM: DRIVER, HYBRID LEAD ANALYST: D. HARTMAN ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HDW/FUNC A B C NASA [3 /1R] [P] [P] [P] [P] [C]
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL ITEM HDW/FUNC A B C NASA [3 /1R] [P] [P] [P] [P] [C]	J
CRITICALITY REDUNDANCY SCREENS FLIGHT HDW/FUNC A B C NASA [3 /1R] [P] [P] [P] [P] [C] [
FLIGHT HDW/FUNC A B C NASA [3 /1R] [P] [P] [P] [P] [COMPARE [/N] [N]	
NASA [3 /1R] [P	
IOA [3/3] [] [] [] [] [] [] [] [] [] [
RECOMMENDATIONS: (If different from NASA) [/] [] [] [] [] (ADD/DEI * CIL RETENTION RATIONALE: (If applicable)] *]
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* CIL RETENTION RATIONALE: (If applicable)	
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REMARKS: INADEQUATE [] IOA AGREES WITH NASA FMEA.	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-150)2 208-1		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1502 DRIVER,	HYBRID			
LEAD ANALYST:	D. HARTI	IAN			
ASSESSMENT:					
CRITICAL FLIGH		REDUNDANG	CY SCREEN	S	CIL ITEM
HDW/FU		A	В	С	
NASA [2 /1R IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [N /N] [и] [и] [N]	[N]
RECOMMENDATIONS:	(If d	ifferent	from NASA)	
[3 /2R	.] [P] [P] [P] (A	[D] DD/DELETE)
* CIL RETENTION	RATIONAL	E: (If ap		ADEQUATE NADEQUATE	
REMARKS: NASA FMEA CONSIDER LOSS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, PO	INDICAT	ION OF TH EDUNDANCY	E VALVE S MAY LEAD	TATUS. RE TO FALSEL	MAY CAUSE DUNDANCY Y FAILING THI

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	I		ΑÍ	/29/ RCS- 5-6K	15	03		-2			NASA DATA BASELINE NEW							x]	
SUBSYST				15	RCS 503 RIVE	R,	н	YBI	RID												
LEAD AN	ALY	ST	:	D.	HA	RT	MA	N													
ASSESSMI	ENT	:																			
	CR		ICAL LIGH				R	EDU	JND	AN	CY	s	CREEN	IS					[L	•	
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NASA IOA	[3 3	/1R /1R]]	P P]		[P F]	[P]]	x]	*
COMPARE	[/]		[]		[N]	נ]			[N	3	
RECOMMEN	IDA!	ric	ONS:		(If	d:	ifi	fer	ent	: 1	fro	m	NASA	.)							
	[/]		[]		[]	(]	ı	(AD	[D/	'DE]	TE.
* CIL RE REMARKS: IOA AGRE								(I	f a	ıpp	oli	.ca	٠		DEQU DEQU]]	

SUBSYSTEM: ARCS MDAC ID: 1504 ITEM: DRIVER, HYBRID LEAD ANALYST: D. HARTMAN ASSESSMENT:	
ASSESSMENT:	
DEDUNDANCY SCREENS CIL	
CRITICALITY REDUNDANCI SCREENS ITEM	
FLIGHT HDW/FUNC A B C	
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COMPARE [N/N] [N] [N] [N]	
RECOMMENDATIONS: (If different from NASA)	
[3/2R] [P] [P] [D] (ADD/DELETE)	
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []	
REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING TO VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.	ΉE

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1509 NASA FMEA #: 05-6KA-29								505		-2						N	IASA BAS	ELI	NE	[x] 1	
SUBSYST MDAC ID ITEM:					15	RCS 605 RIVEI	R,	Н	YBI	RID										•	•	•	
LEAD AN	ALY	ST	:		D.	HAI	RТ	MA	N														
ASSESSMI	ENT	:																					
		F	LIC	H?				R	EDU	JNDA	/N	CY	S	CREE	:NS	5				CI			
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COMPARE	[/N	ſ]		[N]		[N]		[N]			[]		
RECOMMEN	DAT	ric	ons	:	((If	d:	if1	fer	ent	f	rc	m	NAS.	A)								
	[/]		[]		[]		[]	([D/[) DELI	ETE	2
* CIL RE	TEN	TI	ON	R	ATI	ONA	LE	: :	(I:	f a	qq	li	ca	ble)								
REMARKS: IOA AGRE																AD AD	EQU EQU	ATE ATE		[]		
TOM AGKE	LS	WΓ	·rH	N.	$\Delta \subset \Delta$	EMI	ת ק																

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-150 05-6KA-2	06 2208 - 1		NASA DATA BASELINE NEW	: [x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1506 DRIVER,	HYBRID			
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:			_		CIL
CRITICAL	LITY	REDUNDA	NCY SCREE		ITEM
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COMPARE [N /N		[и]		[N]	[и]
RECOMMENDATIONS	: (If	differen	t from NA	SA)	
[3 /2	R]	[P]	[P]	[P]	[D] ADD/DELETE)
* CIL RETENTION	N RATIONA	LE: (If	applicabl	e) ADEQUATI INADEQUATI	E [] E []
REMARKS: NASA FMEA CONSI LOSS OF ACCURA PROVIDED. LOS VALVE CLOSED,	LE INDICE	TION OF	OV MAV T.	THIS FAILU STATUS.	RE MAY CAUSE REDUNDANCY ELY FAILING THE
AT MEETING WIT	H SUBSYST	TEM MANA	GER ON 1/	20/88, NSTS	22206 WAS

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMI ASSESSMI NASA FMI	ZNT.	ID:	ADCC.						A DAT. SELINI NEI]	ļ			
SUBSYSTE MDAC ID: ITEM:	EM:		ARCS 1507 DRIVE	ER,	Н	YBRID)							Δ	,]	
LEAD ANA	LYSI	r:	D. HA	RTI	ſΑ	N										
ASSESSME	NT:															
	F	'ICAL 'LIGH	T		R	EDUND	AN	CY	SCI	REENS	S			ΙL		
	HD	W/FU	NC		A			В			С		IJ	CEN	1	
NASA IOA	[3 [3	/1R /1R]	[P P]	[P F]]	P] P]		[x]	*
COMPARE	[/]	[J]]			N	-	
RECOMMENI	ATI	ons:	(If	di:	ff	erent	: f	ro	m N	ASA)						
	[/]	[]	[]	[)	(AI	[DD/1] LE'	TE)
* CIL RET	ENTI	ON R	ATIONA	LE:	:	(If a	pp	li	cab:	le)						•
REMARKS: IOA AGREES										7	ADEQU ADEQU	ATE ATE	[[]	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-15	08 2208-1		NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1508 DRIVER,	HYBRID			
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICAL	ITY	REDUND	ANCY SCRE	ens	CIL ITEM
FLIGH HDW/FU	INC	A	В	С	
NASA [2 /1H IOA [3 /3	R] [[P] []	[F] []	[P] []	[X] *
COMPARE [N /N					[и]
RECOMMENDATIONS	: (If (differen	t from NA	.SA)	
		[P]		ſ₽l	[D] ADD/DELETE)
* CIL RETENTION	RATIONA	LE: (If	applicabl	.e) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSI LOSS OF ACCURAT PROVIDED. LOSS VALVE CLOSED, F	E INDICA	LION OF	NCV MAY L	EAD TO FALSE	LY FAILING THE
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE	WAS AGRETO DIFFE	EED UPON ERENT IN	TERPRETAT	20/88, NSTS ISSUE (MULT IONS OF NST	22206 WAS FIPLE FAILURES) S 22206.

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	' I	D:		ARCS	-15	509) 208	-2					1		A DA SELI	INE] :) X]	
SUBSYSTIMDAC ID					ARCS 1509 DRIV	ER,	H	[YB]	RID									•		
LEAD ANA	\LY	ST	:	I). н	ARI	'MA	N												
ASSESSME	ENT	:																		
		F	LIG		Y				JNDA	NC		S	CREEN					CI:		
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* CIL RE	ren	TI	ON	RA	rion.	ALE	E :	(I	f ap	gc	li	ca	ble)							
REMARKS: IOA AGREI																UATE UATE		[]	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		В	SA DATA: ASELINE [] NEW [X]										
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1510 DRIVER, HYBRID												
LEAD ANALYST:	D. HARTMAN												
ASSESSMENT:			477										
CRITICAI FLIGH	JITY REDUND	ANCY SCREENS	CIL ITEM										
HDW/FU	INC A	в с											
NASA [2 /1F IOA [3 /3	R] [P]	[F] [P [] [] [X] *										
COMPARE [N /N													
RECOMMENDATIONS	: (If differe	nt from NASA)											
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* CIL RETENTION	RATIONALE: (If	applicable) A	DEQUATE [] DEQUATE []										
LOSS OF ACCURAT	* CIL RETENTION RATIONALE. (IT dept. ADEQUATE [] INADEQUATE [] REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE STATUS. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.												
DISCUSSED. IT	H SUBSYSTEM MANA WAS AGREED UPON TO DIFFERENT IN	TERPRETATIONS	, NSTS 22206 WAS E (MULTIPLE FAILURES) OF NSTS 22206.										

THEREFORE, THIS ISSUE REMAINS OPEN.

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SUBSYSTI MDAC ID ITEM:	EM:			15		Н	YB.	RID											J	
LEAD AND	ALYS	ST	:	D.	HART	MA	N													
ASSESSME	ENT:	:																		
		F	ICAL LIGH	r		R	ED	JNDA	LN (CY	S	CREEN	s					ΙL		
	H	łDV	/FU	NC		A				В			С				1.1	ren	1	
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COMPARE	[/]	ſ]		[N]	ſ]				N	_	
RECOMMEN	DAT	'IO	NS:	(If di	.f1	er	ent	f	rc	m	NASA)							
	[/]	[]		[]	[]	((ADI	[D/	DE] LE	TE
* CIL RE	TEN:	TI	ON R	ATI	ONALE	:	(I	f ap	qc	li	ca	ble)					Ť			•
REMARKS:													AD AD	EQU EQU	JATE JATE	: {	:]	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1	512				NA B	SA DA ASELI N	TA: NE [EW []	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1512 DRIVER	, H	BRID							
LEAD ANALYST:										
ASSESSMENT:						- T. I. C.		CIL		
CRITICAL		R	EDUND	ANCY	SCRI			ITE		
FLIG HDW/F		A		В	i	С				
NASA [/ IOA [3 /3		[]	[]]]	[] *	
COMPARE [N /N	_	ι	1	[]	[3	[]	
TO THE PART OF THE	· (Tf	di	ffere	nt fi	com N	ASA)				
RECOMMENDATIONS	·		1		1	ſ	1	[(ADD/] DELET	E)
* CIL RETENTION	N RATIO	IALE	: (If	app	lical	ole) IN	ADEQU. ADEQU	ATE [ATE []	
REMARKS: AFT MANIFOLD I IN CIRCUITRY.	SOLATIO SEE AS	N VA SESS	LVE	5 RE IDs	-ANA ARCS	LYZED 1200	BY I 1X-12	OA DUE 075X.	TO CH	IANGE

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SUBSYSTEN MDAC ID: ITEM:	1:		ARCS 1513 DRIVI	ER,	НУЕ	BRID						MEN	L]
LEAD ANAL	YST	':												
ASSESSMEN	T:													
C	F]	ICALI LIGHT W/FUN	•		RED	UNDAN			REEN	s			CIL ITEM	
							В			C				
NASA IOA	[3	/ /2R]	[p]	[[F]	[[P]		[[X] * 1
COMPARE ([И	/N]	[N]	[N]	ſ	N]		[N]	-
RECOMMENDA	TIO	NS:	(If	di:	ffer	ent :	fro	m N	ASA)					
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REMARKS:			•						IN	AD:	EQUAT EQUAT	'ਸ਼ ੰ]	
AFT MANIFOR	LD] RY.	ISOLA SEE	TION ASSE	VAL SSM	VE ENT	#5 RE IDs	-Al AR	NALY CS 1	ZED 200	B: 1X-	Y IOA -1207	DUE	TO	CHANGE

ASSESSMEN' ASSESSMEN' NASA FMEA	T ID:	ARCS-15	514					SA DATA: ASELINE NEW]
SUBSYSTEM MDAC ID:		ARCS 1514 DRIVER	, нч	BRID						
LEAD ANAI	YST:									
ASSESSMEN	T:								CIL	
C	CRITICAL		RI	EDUND	MCA	SCREE	NS		ITE	
	FLIGH HDW/FU		A		В		С			
NASA IOA	[/]	[]	[]	[]	[] *
COMPARE	[N /N	1	ι	3	[3	[]	[]
RECOMMEN	TATTONS	: (If	dif	feren	t fr	om NAS	SA)			
RECORDIN	[/	•)			[] (2	[ADD/I] DELETE)
* CIL RE	ETENTION	RATION	ALE:	(If	appl	icabl		DEQUATE	[]
REMARKS: AFT MANI IN CIRCU	: IFOLD IS UITRY.	OLATION SEE ASS	VAI ESSI	LVE #9	RE-	-ANALY ARCS 1	ZED 2001	BY IOA LX-12075	DUE '	TO CHANGE

ASSESSM ASSESSM NASA FM	ENT	']	D:	ARCS-	-15	51!	5					1	NASA Base		3]	
SUBSYST MDAC ID ITEM:				ARCS 1515 DRIVE	R,	F	IYE	BRID									,	
LEAD AN	ALY	ST	:															
ASSESSM	ENT	:																
		F	ICAL LIGH	T		R	ED	UNDAN	ICY	SCR	EEN:	S				IL	_	
	I	IDI	W/FU	NC		A	ı		В			C			Τ.	TEN	1	
NASA IOA	[3	/ /2R]	[F]]	F]	[P]		[x]	*
COMPARE	[N	/N]	[N]	[N	J	[N]		-	N	•	
RECOMMEN	DAT	'IC	ns:	(If	di	.fi	fer	ent	fro	om N	ASA)							
	[/					[]	[]	(AD	[/Q(DE:] LEI	ſE)
* CIL RE	TEN	TI	ON R	ATIONA	LE	:	(I	fap	pli	.cab]	le)							·
REMARKS:											IN.	AD	EQUA'	TΕ	[:]]	
AFT MANII	ITR:	Y.	SE	E ASSE	VA SS	LV ME	E NT	#5 RE IDs	-A AR	NALY CS 1	ZED 200	В 1Х	Y IO2	A DU 75X-	E '	то	СН	ANGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1516			NASA DATA: BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1516 DRIVER, H	YBRID				
LEAD ANALYST:						
ASSESSMENT:						
CRITICAL FLIGH		EDUNDANC	SCREENS	5	CIL	
HDW/FU		. I	3	С	IIEM	•
NASA [/ IOA [3 /2R] [] [P] [] [P]	[] *]
COMPARE [N /N] [N] [1	1] [n]	[]
RECOMMENDATIONS:	(If dif	ferent fi	com NASA))		
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* CIL RETENTION	RATIONALE:	(If app)	-	ADEQUATE NADEQUATE	[]
REMARKS: AFT MANIFOLD ISO IN CIRCUITRY. S				BY IOA DU 01X-12075X		CHANGE

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SUBSYSTE MDAC ID: ITEM:			ARCS 1517 DRIV		IYBRI	D							
LEAD ANA	LYST	!:											
ASSESSME	ENT:												
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NASA IOA	[3	/3]]]	[[]	[]		[] *	
COMPARE	[N	/N	1	[]	[)	[]		[)	
RECOMMEN	IDATI	ons:	(3	If dif	fere	nt fr	om N	(ASA)					
	[/]	[]	[]	[]	(A)	[DD/] 'DELETI	E)
* CIL RE		'ION	RATIO	ONALE:	(If	appl	icab	A	DEQU DEQU		[]	
AFT MANI		ISO	LATIC	ON VAI	VE #	5 RE-	ANAL	YZED	BY I	OA DI	UΕ	TO CH	ANGE

IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.

ASSESSMEN ASSESSMEN NASA FME	NТ	ID		ARCS-	·1518					ASA D BASEL		[]	
SUBSYSTE MDAC ID:	M:			ARCS 1518 DRIVE	ER, H	YBRII)							
LEAD ANA	LYS	T:	1											
ASSESSME	NT:	3												
	CRI			ITY	R	EDUN	DANCY	SCR	EENS			CIL		
	I		JIGH V/FU		A		E	3	C	:				
NASA IOA	[3	/]	[]	[]	[[]		[]	*
COMPARE	[N	/N)	[]	[]	[3		[]	
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LEAD ANALY	YST:								
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SUBSYSTEM MDAC ID:	[:	ARCS 1524 FUSE,	1A							
LEAD ANAI	LYST:	D. HAI	RTMAN	1						
ASSESSMEN	NT:									
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1530]	NASA DATA: BASELINE NEW								
MDAC ID:	ARCS 1530 FUSE, 1A											
LEAD ANALYST:	D. HARTMAI	4										
ASSESSMENT:												
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SUBSYSTEM: MDAC ID: ITEM:		ARCS 1531 FUSE,	1 A							
LEAD ANALY	ST:	D. HA	RTMA	N						
ASSESSMENT	:									
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LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1536					ASA DAT. BASELIN NE					
	ARCS 1536 FUSE, 1A										
LEAD ANALYST:	D. HARTMA	N									
ASSESSMENT:											
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RECOMMEN	IDATI	ons:		(If	d	if	fere	ent	fr	om	NASA)						
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REMARKS:		7 T M T T	NT X C	ים אי	W E	7.												
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-154 05-6KA-2	2 136-2		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1542 RELAY				
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					677
CRITICAL		REDUNDA	NCY SCREE	ns	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [2 /11 IOA [3 /21	R] [P] P]	[F] [P]	[P] [P]	[X] *
COMPARE [N /N] []	[N]	[]	[]
RECOMMENDATIONS	: (If d	ifferen	t from NAS	SA)	
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* CIL RETENTION	RATIONAL	E: (If	applicabl	e) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONSIINABILITY TO CICAPABILITY THUS	OSE THE	MISSION	THIS	THIS FAILUR PREVENTS CR NS. INABIL DUMP.	E CAUSES OSSFEED ITY TO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	[י]	D:	1	L/29 ARCS 05-61	-15	543	3 L36-	.1				N	IASA D BASEL		[x] : 1	1 1
SUBSYST MDAC ID ITEM:				1	RCS .543 ELA	ľ													
LEAD AN	ALY	ST	:	D	. на	RT	'MA	N											
ASSESSMI	ENT	:																	
	CR		ICA LIG	LIT HT	Y		R	EDUI	NDAN	CY	so	CREEN	S				ΓL		
]	HD	W/F	UNC			A			В			С			IJ	ren	1	
NASA IOA		3 3	/1 /1	R] R]]	P P]	[P F]]	P P]		[x]	*
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RECOMMEN	DAI	PIC	ons:	:	(If	đi	if1	ere	nt :	fro	m	NASA))						
	[/			[]]	[ŧ)	(ADI	[D/:] LE	TE)
* CIL RE	TEN	TI	ON	RAT	ION	LE	:	(If	app	li	.cal		AD:	EQUAT !		•		1	•
REMARKS: IOA AGREI	ES 1	WI	TH	NAS	A FM	ŒΑ	•					IN	AD:	EQUAT	E (<u>,</u>	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-15 05-6KA-	44 2136-2		NASA D BASEL	ATA: INE [] NEW [X]
	ARCS 1544 RELAY				
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICAL FLIGH		REDUND	ANCY S	CREENS	CIL ITEM
HDW/FU	NC	A	В	C	
NASA [2 /1R IOA [3 /2R] [P] P]	[F] [P]	[P] [P]	[X] *
COMPARE [N /N] []	[N]	[]	[]
RECOMMENDATIONS:	(If d	ifferen	t from	NASA)	
[2 /2] []	[]	[]	[X] (ADD/DELETE)
* CIL RETENTION	RATIONALI	E: (If a	applica		
REMARKS:				ADEQUAT INADEQUAT	E[] E[]
NASA FMEA CONSIDE INABILITY TO CLOSE CAPABILITY THUS TO CROSSFEED MAY CAN	se the 1, Loss of 1	/2 VALVI MISSION	E. THI OPERAT	IS PREVENTS C TIONS. INABI	ROSSFEED

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATASSESSMENT ID:	ARCS-	1545		NASA DATA BASELINE NEV	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1545 RELAY				
LEAD ANALYST:	D. HA	RTMAN			
ASSESSMENT:					
	ALITY GHT	REDUN	DANCY SCR	EENS	CIL ITEM
	FUNC	A	В	С	
NASA [3 ,	1R] 2R]	[P] [P]	[P] [F]	[P] [P]	[x] *
COMPARE [и ј	[]	[N]	[]	[N]
RECOMMENDATIO	s: (If	differe	ent from N	ASA)	
[2	2]	[]	[]	[]	[A] ADD/DELETE)
* CIL RETENTI	N RATION	ALE: (I	f applicab	ole) ADEQUATE INADEQUATE	
REMARKS: LOSE CAPABILI OPERATIONS TH AN RTLS/TAL A	S LOSS C	F MISSI	ON. INABI	LITY TO CROS	SFEED DURING

ISSUE NOT RESOLVED AT MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	IASA FMEA #: 05-6KA-2126-2 SUBSYSTEM: ARCS MDAC ID: 1546 ITEM: RELAY											
SUBSYSTEM: MDAC ID: ITEM:	1546											
LEAD ANALYST:	D. HARTM	AN										
ASSESSMENT:												
CRITICAL		REDUNDANCY S	CREENS	CIL ITEM								
FLIGH HDW/FU		A B	C									
NASA [3 /1] IOA [3 /3	R] [P] [F]	[P] []	[X] *								
COMPARE [/N] [N] [N]	[и]	[и]								
RECOMMENDATIONS	: (If di	ifferent from	NASA)									
[3 /3	_] []	_	[D] (ADD/DELETE)								
* CIL RETENTION	RATIONAL	E: (If applio	cable) ADEQUA INADEQUA	re [] re []								
REMARKS: NASA FMEA CONSI EFFECT.	DERS MULT	IPLE FAILURE	S. THIS FAIL	URE ALONE HAS NO								
AT MEETING WITH	H SUBSYSTE WAS AGREE	MANAGER ON DUPON THAT	1/20/88, NST THE ISSUE (MU TATIONS OF NS	S 22206 WAS LTIPLE FAILURES) TS 22206.								

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REPORT DATE 2/26/88

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.
THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT ENT EA	r 1 r :	DATE ID: :	1/2 ARC 05-	9/88 S-15 6KA-	47 21	.26	-1					NASA BAS	A DATA SELINI NEV	A: E [V [) X 1	
SUBSYST MDAC ID ITEM:	EM:	:		ARC 154 REL	S 7											,	
LEAD AND	ALY	SI	? :	D. 1	HART	MA	N										
ASSESSMI	ENT	:															
	CR	IT F	ICAL LIGH	ITY T		RI	EDU	JND.	AN	CY	sc	REENS			CI	_	
				NC		A				В			С		ITI	EM	
NASA IOA	[3	/1R /2R]	[P P]]	P F]	[]	P]		[[}] []	*
COMPARE												[]		[N	_	
RECOMMEN	DAI	ľIC	ONS:	(I	f di	ff	er	ent	: f	rc	m N	ASA)					
	•		/2		[-					[J	(AI	[A] ELE	TE)
* CIL RE	ren	ΤI	ON F	OITAS	VALE	:	(II	f a	рp	li	cab						
REMARKS:	ART	T.T	ጥ ጥ	'O CT (NGE 1			-				INA	DEQU.		•]	
LOSE CAPA OPERATION AN RTLS/1	IS TAL	TH A	US L BORT	OSS C	OF MI CAUS	ISS SE	LVE SIC IN	e. On. ICOI	TI : MPI	HI: LE:	S PI ABII FE (REVEN' LITY ' DMS A	IS C IO C BORT	ROSSF ROSSF DUMP	EED EED	DUI	RING

ISSUE NOT RESOLVED AT MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	NT NT A #	DA' ID	TE:	1/2 ARC 05-	9/88 S-1 -6KA	8 54 -2	8 12	6-2						SA DATA: ASELINE NEW	[x]		
SUBSYSTE MDAC ID:	: M:			154	CS														
LEAD ANA	LYS	T:		D.	HAR	TM	AN												
ASSESSME	ENT:																		
	CRI		CAL				RE	DUND	ANC	CY	SCR	REENS	3			L EM			
	ŀ	IDW	/FU	NC			A			В			С						
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COMPARE	[/]		[]	[]	[1	[}		
RECOMME	NDA'	ric	ons:		(If	d:	iff	feren	t	fr	om 1	NASA)						
	[3	/3	3		[]	[]	[] (Al	[DD,	D / DI] ELE	ETE)	
* CIL R	ETE	NT:	ION	RAI	NOI	ΑL	E:	(If	ap	pl	ica	ble) I	A NA	DEQUATE DEQUATE	[]		
REMARKS NASA FM EFFECT.	EΑ	CO	NSII	ERS	s MU	LT	IP:	LE F	AIL	UR	ES.	тн	IS	FAILURE	A	LOI	NE	HAS	NC
	ED.	חו	IT V	VAS	AGR DIFF	EE ER	D EN	UPON T IN	TI TEF	RPF	ETA	r. 13	30	, NSTS 2 E (MULTI OF NSTS				AS ILUR	ES)

ASSESSM ASSESSM NASA FM	ENT	'I	D:	AR	29/ CS- -6K	15	49		1					•		A DA SELI N		[X] []	
SUBSYST MDAC ID ITEM:				AR 15 RE														-		-	
LEAD AN	ALY	ST	:	D.	HAI	RT.	MA	N													
ASSESSM	ENT	:																			
	CR		ICAL LIGH				R	EDUI	NDA	7N(CY	sc	CREE	NS					IL TE		
	1	HDI	W/FU	NC			A				В			(2			Δ.	LE	M	
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COMPARE	[/]		[]		[N]	(]			ι	N]	
RECOMMEN	VDA'I	ric	ons:	ı	(If	đi	Ĺfí	ere	∍nt	. 1	ro	m	NASA	۲)							
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IOA AGRE	にひ	ΜŢ	TH N	IASA	1 FM	EA	٠.														

ASSESSMEN'	IDAC ID: 1550												N			OAT!	E [) ()		
SUBSYSTEM MDAC ID:	:		155	0																	
LEAD ANAL	YST:		D.	HAR	TM	AN															
ASSESSMEN	IT:																	CI	т.		
C	CRITI					RE	וטם	NDA	/NC	Y	sc	REE	NS					-	EM		
		LIGH N/FU				A				В				С							
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RECOMMEN	DATI	ONS	:	(If	đ	if:	fer	en	t	fr	om	NAS	SA))							
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* CIL RE	CTENI	NOI	RAT	TION.	AL	E:	(1	Ιf	ap	pl	ic	abl			DEQ DEQ	TAU TAU	E E	[]	
REMARKS: NASA FMI INABILIT CAPABILIT CROSSFE	ry To) CI	OSE	3/4	/ =) V	ינה	A 171 (•			mT/	MC	,	TN	IARI	r T.T	TΥ	\mathbf{T}	0	

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM:	EN' EA EM:	#:	[D:	AF 05 AR 15	RCS-155 5-6KA-2 RCS		·1				ASA DA' BASELII Ni	NE	[[x]
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ASSESSME	ENT	:												
		F	ICAI LIGH	T	F	EDUI	NDANC	Y S	CREENS	5		_	IL	
			W/FU		. A		1	В		С		ľ	TEM	
NASA IOA]	2	/2 /2]	[]	[[]	[:]	[х ј х ј	*
COMPARE	[/]	[]	[]	Ţ]	N j]	[]	
RECOMMEN	DAT	CIC	NS:	(If dif	fere	nt fr	om.	NASA)					
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REMARKS:	WT:	mrz	Do =						INA	/DE	QUATE QUATE	ř]	
DISAGREE OF A LEAK	MT.	T.H	BOI	н.	INABII	ITY	TO C	Losi	E VALV	Æ :	PREVEN	TS :	ISOL	ATION

ASSESSMENT ASSESSMENT NASA FMEA	DATE: ID: #:	1/29/88 ARCS-15 05-6KA-	3 552 -2127-2				ì	VASA DATA BASELINE NEW] :]	
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1552 RELAY							_			
LEAD ANALYS	ST:	D. HART	MAN									
ASSESSMENT:	;											
	TICALI FLIGHT	?	REDUNI	ANC	Y	SCRE	ens		CI			
	IDW/FUN		A		В		С		1.1	EN	1	
] ARAM] AOI	2 /1R 3 /1R] [P] P]	[F P]	[P]	[X X]	*
COMPARE [N /] [3	[]	N]	[]	[]	
RECOMMENDAT	ions:	(If di	fferen	t fi	ro	m NAS	A)					
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* CIL RETENT	rion R	ATIONALE	: (If a	appl	lio	cable						
REMARKS:							INAD	EQUATE EQUATE	-]	
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-15 05-6KA-	553	7-1)		SA DATA ASELINE NEW	[x]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1553 RELAY								-				
LEAD ANALYST:	D. HAR	rman	i										
ASSESSMENT:													
CRITICAL		RE	DUND	ANC'	¥	SCREE	NS	}		CI	L EM	ſ	
FLIGH HDW/FU		A		1	В			С					
NASA [3 /1R IOA [3 /1R	1]	[P]	[]	P F]]	P P]	[x]	*
COMPARE [/]	[]	[N]	[1	[N]	
RECOMMENDATIONS:	(If	dif:	feren	t f	r	om NAS	SA)					
[/]	[]	[1	[] (4	ADD,	/D	EL]	ETE)
* CIL RETENTION	RATIONA	ALE:	(If	app	1:	icable			DEQUATE DEQUATE]	
REMARKS: IOA AGREES WITH	NASA FI	MEA.											

ASSESSME ASSESSME NASA FME	ENT D ENT I EA #:	ATE: D:	1/29/88 ARCS-1554 05-6KA-2137-2									ASA DAT BASELIN NI]	
SUBSYSTE MDAC ID:			ARCS 1554 RELAY													
LEAD ANA	LYST	:	D. HA	RT	MAI	Ŋ										
ASSESSME	NT:															
		ICAL:										CIL				
		INC A			A E			з с					[TE	M		
NASA IOA	[2 [2	/1R /2]	[P]	[F]	[P]	((X]	*
COMPARE	[/N]	[N]	[N]	[N]	[]	
RECOMMEN	DATI	ons:	(If	đ:	ifi	fere	nt i	fro	om 1	NASA))					
	[3	/1R]	[P]	[F]	[P] ADE	X D/DI		ΓE)
* CIL RE	TENT	ION F	RATION	ALI	€:	(If	app	pli	[ca]	ble)			_		_	
										I		DEQUATE DEQUATE]	
REMARKS: NASA FME INABILIT												FAILUR			SES	THE

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

CAPABILITY THUS LOSS OF MISSION OPERATIONS. INABILITY TO

CROSSFEED DURING RTLS/TAL MAY CAUSE INCOMPLETE OMS ABORT DUMP.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1555 05-6KA-21	: [x] [x]			
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1555 RELAY				
LEAD ANALYST:	D. HARTMA	N			
ASSESSMENT:					
CRITICAL FLIGH		EDUNDANCY	SCREENS		CIL ITEM
HDW/FU		В	(C	11211
NASA [2 /2 IOA [2 /2] [] [] []	[X] * [X]
COMPARE [/] [] [N] [1	N]	[]
RECOMMENDATIONS:	(If dif	ferent fr	om NASA)		
[2 /1R] [P	'] [P] []	P] (AI	[X] DD/DELETE)
* CIL RETENTION	RATIONALE:	(If appl	, i	ADEQUATE ADEQUATE	[]
REMARKS: DISAGREE WITH BO OF A LEAK.	TH. INABI	LITY TO C	LOSE VAL	VE PREVEN	rs isolation

ASSESSMENT DATI ASSESSMENT ID: NASA FMEA #:	: 1/29/8 ARCS-1 05-6KA	8 556 4-2127-2	NASA DATA: BASELINE [] NEW [X]								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1556 RELAY										
LEAD ANALYST:	D. HAI	RTMAN									
ASSESSMENT:											
CRITIC	ALITY SHT	REDUND	ANCY SCRE	ENS	CIL ITEM						
HDW/		A	В	С							
NASA [2 / IOA [3 /	IR] IR]	[P] [P]	[F] [P]	[P] [P]	[X] * [X]						
COMPARE [N /	3	[]	[11]	[]	[]						
RECOMMENDATION	s: (If	differen	t from NA	SA)							
[3 ,	1R]	[P]	[F]		[X] ADD/DELETE)						
* CIL RETENTION	N RATION	NALE: (If	applicabl	le) ADEQUATE INADEQUATE	[]						
REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE WILL CLOSE THE VALVE AND CAUSE INABILITY TO RE-OPEN IT. REDUNDANCY PROVIDED BY SECOND LEG OF 3/4/5 AND CROSSFEED LEG. LOSS OF ALL REDUNDANCY PREVENTS PROPELLANTS TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS.											
AT MEETING WI DISCUSSED. I WAS RAISED DU THEREFORE, TH	TI DD										

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-15 05-6KA-	57 2133-1		NASA DATA: BASELINE [] NEW [X]				
SUBSYSTEM:	ARCS 1557 RELAY]			
LEAD ANALYST:	D. HARTI	MAN						
ASSESSMENT:								
CRITICAL: FLIGHT	Ľ			CENS	CIL			
	1C			С	ITEM			
NASA [3 /1R IOA [3 /2R] [P] P]	[P] [F]	[P] [P]	[X] * [X]			
COMPARE [/N] []	[N]	[]	[]			
RECOMMENDATIONS:	(If di	fferent	from NA	SA)				
[3 /2R) [Pj	[P]	[P] (Ar	[D] DD/DELETE)			
* CIL RETENTION R	ATIONALE	: (If an	plicable	· =)	,,			
REMARKS:				ADEQUATE INADEQUATE	į i			
NASA FMEA CONTAIN TO CROSSFEED WITH OTHER GPC COMMAND CROSSFEED, THUS LA	S Ince	OF ATT	JRES. FA IDANCY PA REDUNDAN	AILURE CAUSES ROVIDED WITH RCY CAUSES IN	INABILITY SWITCH AND ABILITY TO			
AT MEETING WITH SUDISCUSSED. IT WAS WAS RAISED DUE TO THEREFORE, THIS IS	DIFFEDEN	m Thomas	VI TUE I	/88, NSTS 22 SSUE (MULTIP NS OF NSTS 2	206 WAS LE FAILURES) 2206.			

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1558 05-6KA-2133-2	NASA DATA BASELINE NEW				
1/01 0	ARCS 1558 RELAY					
LEAD ANALYST:	D. HARTMAN					
ASSESSMENT:						
CRITICAL FLIGH		ANCY SCREEN	ıs	CIL ITEM		
HDW/FU	NC A	В	С	IIEM		
NASA [2 /1R IOA [2 /2] [P]] []	[F] [P]	[X] * [X]		
COMPARE [/N] [N]	[N]	и ј	[]		
RECOMMENDATIONS:	(If differen	t from NASA	.)			
[3 /1R] [P]	[AN]		[D] D/DELETE)		
* CIL RETENTION F	ATIONALE: (If a	applicable)				
REMARKS:			ADEQUATE NADEQUATE	[]		
NASA FMEA CONSIDE THE VALVE TO ISOI INCORRECTLY IDENT 56V76A116K46.	MIE A INKUSTER	THAT MAN	T. 173.73 mar			

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	88 1559 A-21		-1					SA DATA ASELIN NE]				
SUBSYSTEM MDAC ID:	M:		ARCS 1559 RELAY												
LEAD ANA	LYST	:	D. HA	RTM	AN										
ASSESSME	NT:														
•		ICAL]	REDI	UNDAN	CY	SCF	REENS	;			IL PEM	,	
	FLIGHT HDW/FUNC						В			С			LEAR	1	
NASA IOA	[3	[P]]	P F]	[P P]	[x x]	*		
COMPARE						C	N]	[]	[]	
RECOMMEN	DATI	ons:	(I :	f di	ffe	rent	fr	om 1	NASA))					
	[3	3 /2R	.]	[P]	[P]	[P			D /DI		TE)
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [INADEQUATE []				
TO CROSS	INADEQUATE []														

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEI ASSESSMEI NASA FME	9/88 S-15 6KA-	60 21	33-2	2					ASA DATA BASELINI NEV) x]				
SUBSYSTEMDAC ID:	M:		ARC 156 REI	:S :0											
LEAD ANA	LYST	:	D.	HART	'MA	N									
ASSESSME	NT:														
(CRITICALITY FLIGHT HDW/FUNC							CY	SC	REENS	5		CI	L EM	
		A			В			С							
NASA IOA	[2 [2	/1R /2]]	P]]	F]] [P]	((x] x]	*
COMPARE	[/N]	[N]	[N]	[N]	•]	
RECOMMEN	DATI	ons:	(If d	if	fere	ent	fr	om 1	NASA)				
	[3	/1R]	[P]	[N.	A]	[P			D]	ETE)
* CIL RE	TENT:	ION 1	RATI	ONAL	E:	(I:	f ap	pl	ical			DEQUATE DEQUATE]	
REMARKS: NASA FMEA CONSIDERS MULT THE VALVE TO ISOLATE A										LOS	SE	CAPABI	LITY	то	CLOSE

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	ENT	I	D:	;	AF	CS-1	L5(32-1	l.						ASA DA BASELI N		[]	
SUBSYSTE MDAC ID:					15	RCS 661 ELAY															
LEAD ANA	LY	ST	:		D.	HAI	RTI	(AP	1												
ASSESSME	ENT	:																			
CRITICALITY FLIGHT HDW/FUNC						?	REDUNDANCY A E						Y SCREENS B C						CIL ITEM		
NASA IOA	[3 2	/	′1R ′2]]	P]		[: [P]	[P]		[x]	*
COMPARE	(N	/	'N]		[N]		[]	N]	(N]		[N]	
RECOMMEN	IDA!	ΓI	ON	ıs:		(If	d :	ifi	fere	ent	f	rc	m NA	SA)						
	[/	,]		[]		[]	[(AE		'DE		ETE)
* CIL RE		NT:	IC	I N	RAT	NOI	AL I	E:	(I1	f aj	gg	1 i	.cabl			DEQUAT DEQUAT		[]	

IOA AGREES WITH NASA FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-156 05-6KA-2			A DATA: SELINE [] NEW [X]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1562 RELAY			
LEAD ANALYST:	D. HARTM	IAN		
ASSESSMENT:				
CRITICAL		REDUNDANC	Y SCREENS	CIL ITEM
FLIGH HDW/FU		A	в с	
NASA [3 /1R IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [/N] [N] [и] [и]	[N]
RECOMMENDATIONS:	(If d	ifferent f	rom NASA)	
[3 /3] [] [] [:	[D] (ADD/DELETE)
* CIL RETENTION	RATIONAL	E: (If app	ADI	EQUATE [] EQUATE []
REMARKS: NASA FMEA CONSII EFFECT.	FAILURE ALONE HAS NO			

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	D:	AR	29/8 CS- -6K			1		NASA DATA: BASELINE [] NEW [X]											
SUBSYSTI MDAC ID ITEM:				AR 15 RE															
LEAD AND	ALY	ST	:	D.	HAI	(T	MA	N											
ASSESSMI	ENT	:																	
	ITY T			RI	EDUN	IDA I	NCY	s	CREEN	1S			CIL ITEM		ur				
	1	HDI	W/FU					A			3		(C		-	L	1	
NASA IOA		HDW/FUNC [3 /1R] [2 /2]					P]		[F)	[P]		[X]	*
COMPARE	[N	/N]		[N]		[N]	[1	1]		[N]	
RECOMMEN	ONS:	ł	(If	di	ff	ere	nt	fr	om	NASA	()								
[/]] []				[] []				(AI	[D/] ELE	TE)	
* CIL RE	RATI	ONA	LE	:	(If	aŗ	pl	ica			DEQU		[]				
REMARKS: IOA AGRE	IASA	Y FM	EA	•					_	_ · • •			L		J				

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1564 05-6KA-21	/29/88 NASA DATA: RCS-1564 BASELINE [] 5-6KA-2132-2 NEW [X]							
SUBSYSTEM:	ARCS 1564 RELAY								
LEAD ANALYST:	D. HARTM	AN							
ASSESSMENT:					•				
	LITY	REDUNDANC	Y SCREEN	S	CIL ITEM				
FLIGH HD W /FU		A	В	С					
NASA [3 /11 IOA [3 /21	R] []	P] [P] [F] [P] [P] P]	[X] * []				
COMPARE [/N] [] [и] []	[и]				
RECOMMENDATIONS	: (If di	fferent f	rom NASA)					
[3 /3] [] [] [] (AI	[D] DD/DELETE)				
* CIL RETENTION	RATIONALE	: (If app		ADEQUATE					
REMARKS: NASA FMEA CONSI EFFECT.	ALONE HAS NO								
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE	SPE LWITOVES)								

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMI ASSESSMI NASA FMI	DATE:	1/29/ ARCS- 05-6K	88 15 A-	65 21	33-	·1				NASA DATA: BASELINE [] NEW [X]								
SUBSYSTE MDAC ID:	21.1		ARCS 1565 RELAY															
LEAD ANA	LYSI	!:	D. HA	RT	MA	N												
ASSESSME	ENT:																	
	CRIT	ITY F		RI	EDU:	NDA	N	CY	S	CREENS	S			IL TE				
	HD	W/FU	NC .	A B C						_	11111							
NASA IOA	[3 [3	/1R /2R	[P P]]	P F]]	P P]	[X X]	*		
COMPARE	[/N]	[]		[N]	ι]	[]		
RECOMMEN	DATI	ons:	(If	d:	iff	fere	ent	1	fro	m	NASA)							
	[3	/2R]	[P]		[P]	[P	•		D / DI		TE)	
* CIL RETENTION RATIONALE: (If applicable)																		
REMARKS:										-		EQUATE EQUATE	[[]			
NASA FME. TO CROSS: OTHER GP	reed	MT.T.H	THE G	PC	:.	RE	EDUI	ND	AN	CY	PROV	'IC	RE CAUSI DED WITH CAUSES]	I SI	TT	CH	ΔN	ח

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

CROSSFEED, THUS LOSS OF MISSION.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1566 05-6KA-2133-	2	BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:				
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL: FLIGH		NDANCY SCREENS	}	CIL ITEM
	NC A	В	С	
NASA [2 /1R IOA [2 /2] [P]] []	[F] [[] [P]	[X] * [X]
COMPARE [/N] [N]	[N] [и ј	[]
RECOMMENDATIONS:	(If differ	ent from NASA)		
[3 /1R] [P]	[AN]		[D] DD/DELETE)
* CIL RETENTION 1	RATIONALE: (I		ADEQUATE ADEQUATE	[]
REMARKS: NASA FMEA CONSIDI THE VALVE TO ISO		FAILURES. LOS		
AT MEETING WITH S DISCUSSED. IT WA WAS RAISED DUE TO	AS AGREED UPO	N THAT THE ISS	UE (MULTIP	LE FAILURES)

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-15	67 2133 - 1		NASA DAT BASELIN NE	
	ARCS 1567 RELAY				
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICAL		REDUNDA	NCY SCR	EENS	CIL ITEM
FLIGH HDW/FU		A	В	С	TIEM
NASA [3 /1F IOA [3 /2F] [P] P]	[P] [F]	[P] [P]	[X] * [X]
COMPARE [/N] []	[и]	[]	[]
RECOMMENDATIONS:	(If d	ifferent	from N	ASA)	
[3 /2F	[P]	[P]	[P]	[D] (ADD/DELETE)
* CIL RETENTION REMARKS:	RATIONAL	E: (If a	applicab	le) ADEQUATI INADEQUATI	
NASA FMEA CONTAL TO CROSSFEED WIT					SES INABILITY TH SWITCH AND

NASA FMEA CONTAINS MULTIPLE FAILURES. FAILURE CAUSES INABILITY TO CROSSFEED WITH THE GPC. REDUNDANCY PROVIDED WITH SWITCH AND OTHER GPC COMMANDS. LOSS OF ALL REDUNDANCY CAUSES INABILITY TO CROSSFEED, THUS LOSS OF MISSION.

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1300		NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1568 RELAY			
LEAD ANALYST:	D. HARTMAN	1	•	
ASSESSMENT:				CIL
CRITICAL	ITY RI	EDUNDANCY SCREEN	S	ITEM
FLIGH HDW/FU		В	С	
NASA [2 /11 IOA [2 /2	R] [P] [F] [] [] [P]	[X] * [X]
COMPARE [/N] [N	[и] [и]	[и]	[]
RECOMMENDATIONS	: (If dif	ferent from NASA	A)	
		P] [NA]		[D] DD/DELETE)
* CIL RETENTION	RATIONALE:	: (If applicable) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSI THE VALVE TO IS	DERS MULTI SOLATE A TH	PLE FAILURES. L RUSTER LEAK.	OSE CAPABII	LITY TO CLOSE
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE THEREFORE, THI	WAS AGREED	MANAGER ON 1/20 UPON THAT THE INT INTERPRETATION)/88, NSTS Z SSUE (MULT ONS OF NSTS	22206 WAS IPLE FAILURES) 22206.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1569 05-6KA-21) .32 - 1		NASA DATA: BASELINE [] NEW [X]								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1569 RELAY				()							
LEAD ANALYST:	D. HARTMA	N										
ASSESSMENT:												
CRITICALI FLIGHT		EDUNDANC	Y SCREE	ens	CIL							
HDW/FUN		:	В	С	ITEM							
NASA [3 /1R IOA [2 /2] [P] [1	P]	[P] []	[] * [X]							
COMPARE [N /N	и] [и] [1		[N]	[N]							
RECOMMENDATIONS:	(If diff	erent fr	om NAS	A)								
			_	[]	[] ADD/DELETE)							
* CIL RETENTION RA	ATIONALE:	(If appl	icable)	ADEQUATE	ſ 1							
REMARKS: IOA AGREES WITH NA	SA FMEA.		נ	INADEQUATE								

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1570 05-6KA-2132-2	NASA DATA: BASELINE [NEW [
SUBSYSTEM: MDAC ID:	ARCS 1570 RELAY		
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:			
CRITICAL	ITY REDUNDANCY SCI	REENS C	IL
HDW/FUN	NC A B	C	TEM
NASA [3 /1R IOA [3 /3] [P] [F]	[¶] []	x] *
COMPARE [/N] [N] [N]	[и]	N]
RECOMMENDATIONS:	(If different from N	IASA)	
[3 /3] [] []	[] [(ADD)	D] /DELETE)
* CIL RETENTION R	ATIONALE: (If applicab		
REMARKS:] TAUQADA] TAUQADANI]]
	RS MULTIPLE FAILURES.	THIS FAILURE AI	LONE HAS NO
WAS RAISED DUE TO	UBSYSTEM MANAGER ON 1/ S AGREED UPON THAT THE DIFFERENT INTERPRETAT SSUE REMAINS OPEN.	ISSUE (MULTIPLE	FATTIFES)

	1/29/88 ARCS-157 05-6KA-2			NASA DATA BASELINE NEW	
MDAC ID:	ARCS 1571 RELAY				
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
CRITICAI FLIGH		REDUNDA	NCY SCRE	ens	CIL ITEM
HDW/FU		A	В	С	
NASA [3 /1F IOA [2 /2] [P]	[P] []	[P] []	[
COMPARE [N /N] [и ј	[N]	[N]	[N]
RECOMMENDATIONS	(If di	ifferent	t from NA	SA)	
[/] [1	[]	[]	[] ADD/DELETE)
* CIL RETENTION	RATIONALI	E: (If	applicabl	e) ADEQUATE INADEQUATE	
REMARKS: IOA AGREES WITH	NASA FME	Α.			

ASSESSM NASA FM	ENT :	ID:	ARC	1/29/88 NASA DATA ARCS-1572 BASELINE 05-6KA-2132-2 NEW																
SUBSYST MDAC ID ITEM:			ARC 157 REL	2																
LEAD AN	ALYS	r:	D. 1	HARTI	IAN															
ASSESSM	ENT:																			
		rical: FLIGHT			RED	UNDAN	CY	sc	REENS	5			CII							
		OW/FUN			A		В			С			ITE	M						
NASA IOA	[3 [3	3 /1R 3 /2R]]	P] P]]	F P]]	P P]		K]	;]]	*					
COMPARE	[/N]]]	[N]	[]		[N]						
RECOMMEN	NDATI	ONS:	(I	f di	ffer	rent :	fro	om I	NASA)											
		/3		[[]	•] . ([D D/D		ETE)					
* CIL RE	ETENT	ION R	ATIO	NALE	: (1	fapp	oli	cal												
REMARKS:											EQUATE EQUATE		[[]						
NASA FME EFFECT.		NSIDE	RS M	ULTI:	PLE	FAILU	RE	s.	THI	S	FAILUR	E #	ALO:	NE	HAS	NO				

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-15 05-6KA-	73	8 A- 1				ASA DATA: BASELINE NEW	[x]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1573 RELAY	-									
LEAD ANALYST:	D. HART	MAN									
ASSESSMENT:											
CRITICAL		RE	DUNDA	NCY	SCREE	NS		CI I'I	IL EM	1	
FLIGH HDW/FU		A		В		C	:				
NASA [3 /1F IOA [3 /1F	:] [[P]	[P]	[]	?]	[x] *	
COMPARE [/] [[]	[N]	(]	[N]	
RECOMMENDATIONS:	(If o	difi	ferent	fr	om NAS	SA)					
[/	3	[]	[]	[] (2] ADD	/DI] ELETE	:)
* CIL RETENTION	RATIONA	LE:	(If a	ppl	icable		ADEQUATE ADEQUATE]]	
REMARKS: IOA AGREES WITH	NASA FM	EA.									

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-157 05-6KA-2	4 128 A- 2		NASA DATA: BASELINE NEW	
MDAC ID:	ARCS 1574 RELAY				
LEAD ANALYST:	D. HARTI	IAN			
ASSESSMENT:					
CRITICAL	ITY	REDUNDA	NCY SCREE	ns	CIL ITEM
FLIGH HDW/FU	IT INC	A	В	С	
NASA [2 /1F IOA [3 /3			[F] []	[P] []	[X] * []
COMPARE [N /N					[N]
RECOMMENDATIONS	(If d	ifferent	from NA	SA)	
				r P l	[D] DD/DELETE)
* CIL RETENTION	RATIONAL	E: (If a	applicabl	e) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSI LOSE CAPABILITY ALL HARDWARE RE LEAK.	DERS MULI TO CLOSE DUNDANCY,	TIPLE FA	ILURES. THIS, C EVENT ISO	WITH RELAY F OUPLED WITH LATION OF A	AILED HIGH, THE LOSS OF THRUSTER
AT MEETING WITH	SUBSYSTI	EM MANAG	ER ON 1/2	0/88, NSTS 2	2206 WAS

THEREFORE, THIS ISSUE REMAINS OPEN.

DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES)

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

ASSESSM ASSESSM NASA FM	ENT	'I	ATE D:	ΑI	/29/8 RCS-3 5-6K/	15	75		-1				N		DA ELI N	NE	[]] ‹]	
SUBSYSTIMDAC ID				15	RCS 575 ELAY														
LEAD AND	ALY	ST	:	D.	HAF	(T)	MA	N											
ASSESSMI	ENT	:																	
	CR		CAI LIGH	.ITY IT	•		R	EDU	JNDAN	(C)	SC	CREEN	s				CIL	-	
	1	HDW	/FU	NC			A			E	3		С				ITE	M	
NASA IOA	[3	/1R /3]		[[P]]	F	']]	P]			[]	*
COMPARE	[/N]		[N]	[N]	[N)			[]	
RECOMMEN	DAT	CIO	NS:		(If	di	ff	er	ent	fr	om .	NASA)						
	[/	_		[]	_]]	(ADI	[D/D1] ELE	TE)
* CIL RE	TEN	TI	ON :	RATI	[ONA]	LE	:	(I	f ap	pl	ica	ble)	ΑĽ	EQU	ĀTE	: f		1	
REMARKS: IOA AGRE	ES	WI:	TH 1	NASA	A FMI	ΞA	. •					I			ATE]	

ASSESSMEI NASA FME	NT : A #:	DATE: ID:	1/29 ARCS 05-6	788 5-15 5KA-1	76 212	28-2	2				N.	ASA BASE	DATA LINE NEW	: [[x]		
SUBSYSTEM MDAC ID:	M:		ARCS 1576 RELA	5														
LEAD ANA	LYSI	r:	D. E	IARTI	IAN	ī												
ASSESSME	NT:																	
(TICAL:							SCR	REENS	5				L LEM			
	HI	W/FUI	NC .		A			В			С							
NASA IOA	[3	2 /1R 3 /1R]	[P P]	[[F P]	[[P P]		[x]	*	
COMPARE	[]	1 /]	[]	[N]	[]		[N]		
RECOMMENI	OATI	ONS:	(I	f di	iff	ere	nt i	fro	om N	ASA))							
	[3	/1R]	[P]	[P]	[P]	(Al	[/QC	D 'DE] :LE	TE)	
* CIL RET	CENT	I NOI	RATIO	NALE	E:	(If	app	1 i	cab		Αſ	EOU	ልጥ ድ	r		1		
REMARKS:										IN	IAI	EQU.	ATE ATE	[]		
NASA FMEATHE VALVE REDUNDANCE TO BE EXELOSS OF M	E AN CY F PELL MANI	D CAU PROVID ED TO FOLD	JSE I DED. MEE THRU	NABI LOS T LA STER	LI SS ND RS	TY OF ING DUR	TO F ALL WEI	RE- RE GH RT	OPE DUN IT C	N IT DANC ONST TAL	Y Y RA AE	AUS PRE INT SORT	ING I VENTS S. COUI	LOS F	S PRO	OF PE	JETS LLANT	S
INABILITY AT MEETIN DISCUSSED WAS RAISE THEREFORE	IG W	ITH S IT WA	SUBSY AS AG DIF	STEM REEC FERE	M U CNT	ANA PON IN	GER THA TERF	ON T	1/ THE	20/8 ISS	8, UE	NS'	rs 22 ULTIE	LE	F	AI	s Lures)

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	: 1/29/88 ARCS-15 05-6KA-	577	8A-1			1	NASA DAT BASELII NI			x]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1577 RELAY											
LEAD ANALYST:	D. HART	rman	•									
ASSESSMENT:												
CRITICA FLIG		RE	DUNDA	NCY	SCREE	ens			CI TT	L EM	ı	
HDW/H		A		В		•	С				•	
NASA [3 /1 IOA [3 /1	R] R]	[P [P]	[P]	[:	P] P]]	x]	*
COMPARE [/]	[]	[N]	(]		[N]	
RECOMMENDATIONS	: (If o	diff	erent	fre	om NAS	SA)						
[/	1	[]	[]	[]	(AD		'DE] ELE	ETE
* CIL RETENTION	RATIONA	LE:	(If a	appl.	icable		ADEQUAT ADEQUAT		[]	
REMARKS:												

IOA AGREES WITH NASA FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:			NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1578 RELAY			
LEAD ANALYST:	D. HART	MAN		
ASSESSMENT:				CIL
CRITICA	LITY	REDUNDANCY SCREEN	IS	ITEM
FLIG HDW/F		A B	С	
NASA [2 /1 IOA [3 /3	R] [[P] [F]	[P] []	* [X] []
COMPARE [N /N		[и] [и]	[и]	[N]
RECOMMENDATIONS	: (If	different from NAS	A)	
		[P] [NA]	r P l	[D] ADD/DELETE)
* CIL RETENTION	N RATIONA	LE: (If applicable	e) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONS LOSE CAPABILIT ALL HARDWARE R LEAK.	IDERS MUI Y TO CLOS EDUNDANC	TIPLE FAILURES. VER VALVE. THIS, COMPANY PREVENT ISO	WITH RELAY OUPLED WITH LATION OF A	FAILED HIGH, THE LOSS OF THRUSTER
			-	COOC WAS

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

WOOF OOK	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1579 NASA FMEA #: 05-6KA-2128-1											ŀ	IASA Basi	ELIN		v :]
SUBSYST MDAC ID ITEM:		3		1	RCS 579 ELAY										, ,,,	^ .	J
LEAD AN	ALY	SI	!:	D	. HART	'MA	LN.										
ASSESSM	ENT	':															
		F	ICA: LIG	HT	Y	R	EDU	JNDAN	CY	SCI	REEN	S			CI		
	HDW/FUNC A											С			IT	EM	
NASA IOA	[3	/1I /3	R]]	P]]	P]	[[P]		[]	*
COMPARE	. [/N]	ſ	N]	[N]		N			[]	
RECOMMEN	DAT	CIC)NS:		(If d	if1	fer	ent i	rc	m N	ASA)						
	[/]	ί		3	[]	[]	(A	[DD/D] ELE	TE)
* CIL RE	ren	TI	ON	RAT	IONALE	::	(I:	f app	li	cab:	le)						Í
REMARKS: IOA AGREI												AD:	EQUA EQUA	TE TE	[]	

ASSESSMI NASA FMI	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1580 NASA FMEA #: 05-6KA-2128- SUBSYSTEM: ARCS													N	ASA BASE	DATA LINI NEV] 2	x]		
SUBSYSTI MDAC ID: ITEM:	E M:			ARG 158 RE	CS 80 Lay																
LEAD ANA	LY	ST	:	D.	HAR	Tì	(A)	ſ													
ASSESSME	NT	:																			
			ICAL: LIGH: W/FUI									CREI						IL TEN			
NASA IOA	[2	/1R /1R]		[P P]	[F P]		[P P]		[X]	*	
COMPARE																					
RECOMMEN	DA:	ric	ONS:	(If o	li	ff	ere	nt :	fro	om	NAS	A)								
	[3	/1R]	(•	P)	[P]		[P]	(A)	[DD/	D 'DE] LE	TE)	
* CIL RE	ΓEN	T	ON R	ATI	ONAI	Æ	:	(If	app	oli	.ca	ble) IN	AD	EQUA EQUA	ATE ATE	[]		
NASA FME	CY PEI IAN	PF LLE	OVID D TO	ED. MEI	inae Lo Et i Uste	Si Al	S (ND) S (I'Y ' OF I ING	IO F ALL WEI	RE RE GH	OP DU T	EN NDA CON:	IT NC ST	Y RA	AUSI PREV INTS	ENTS	LOS S P	S RO	OF PE	JE' L LA I	TS. NTS
AT MEETIN DISCUSSED WAS RAISE THEREFORE	ED.	DÜ	E TO	DII	JREE FFER	EI D	יייני יייני	ON TNT	THA TRP	DE.	ואיוי	w Ti	20	TT	/ MTT	TMTT	`T	-	. ~ -	S LURI	ES)

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-19 05-6KA	581	8A-1			N	NASA DATA BASELINE NEW		
IIDNO ID.	ARCS 1581 RELAY								
LEAD ANALYST:	D. HAR	TMAN	İ						
ASSESSMENT:									
CRITICAL		RE	DUND	NCA	SCREE	NS		CIL	
FLIGH HDW/FU		A		В			С		-
NASA [3 /1F IOA [3 /1F	R]	[P]	[P]]	P] P]	[x] *
COMPARE [/]	[]	[N]	[]	[N]
RECOMMENDATIONS	(If	dif	feren	t fr	om NAS	A)			
[/]	[]	[]	[] (2	[ADD/D] ELETE)
* CIL RETENTION	RATION	ALE:	(If	appl	icable		ADEQUATE IADEQUATE]
REMARKS: IOA AGREES WITH	NASA F	MEA.				-			

ASSESSMEN' ASSESSMEN' NASA FMEA	r ID:	ARUSTI	3 582 -2128A-2		NASA DATI BASELINI NEV	
SUBSYSTEM MDAC ID: ITEM:	:	ARCS 1582 RELAY				
LEAD ANAL	YST:	D. HAR	TMAN			
ASSESSMEN	T: RITICAL	. T TY	REDUNDA	NCY SCRE	ens	CIL ITEM
	FLIGH HDW/FU	T	A	В	С	
NASA IOA	[2 /1H	R]	[P] []	[F] []	[P] []	[X] *
COMPARE	[N /N	3	[и]	[и]	[и]	[и]
RECOMMEN	DATIONS	: (If	differen	t from NA	ASA)	
KEOOLE -	[3 /1		[P]	[AN]	[P]	[D] (ADD/DELETE)
* CIL RE	TENTION	RATION	ALE: (If	applicab	le) ADEQUAT INADEQUAT	re [] re []
REMARKS: NASA FMI LOSE CAI ALL HARI LEAK.	EA CONSI PABILITY DWARE RI	DERS MU TO CLC	ULTIPLE FA SE VALVE CY, MAY P	AILURES. . THIS, REVENT IS	WITH RELAY COUPLED WIT COLATION OF	FAILED HIGH, THE LOSS OF A THRUSTER

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	IEN'I	ני]	[D:	A	/29/8 RCS-1 5-6KA	583	3 128	-1				N	NASA D BASEL		[X 1]
SUBSYST MDAC ID ITEM:				1:	RCS 583 ELAY											••]	l
LEAD AN	ALY	ST	':	D	. HAR	ľMA	.N										
ASSESSM	ENT	:															
	CR		ICAI LIGI		ľ	R	EDU	INDAN	CY	SCI	REEN	S			CII	_	
]	HDI	W/Ft	INC		A			В			С			ITE	M	
NASA IOA	[3	/1F /3	?]]	[P]]	P]	[P]		[]	*
COMPARE	[/N]	[N]	[N]	[N]	(]	
RECOMMEN	IDAT	'IC	NS:		(If d	ifi	fer	ent 1	fro	om N	ASA)						
	[/]]]	•]] ADD	/DI) ELE	TE
* CIL RE	TEN	TI	ON 1	RAT:	IONALI	ጀ:	(If	f app	li	cab.	le)				•		
REMARKS:												AD:	EQUATE EQUATE] []	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1584	NASA DATA: BASELINE NEW	
	ARCS 1584 RELAY		
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:			
CRITICAL		CY SCREENS	CIL ITEM
FLIGH HDW/FU		В С	
NASA [2 /1R IOA [3 /1R] [P] [] [P] [F] [P] P] [P]	[X] * []
COMPARE [N /] [] [N] []	[N]
RECOMMENDATIONS:	(If different	from NASA)	
[3 /1R] [P] [P] [P] (A	[D] DD/DELETE)
* CIL RETENTION	RATIONALE: (If app	plicable) ADEQUATE INADEQUATE	
THE VALVE AND CA	USE INABILITY TO	URES. THIS FAILURE RE-OPEN IT CAUSING REDUNDANCY PREVENT	LOSS OF JETS

TO BE EXPELLED TO MEET LANDING WEIGHT CONSTRAINTS. LOSS OF MANIFOLD THRUSTERS DURING RTLS/TAL ABORT COULD RESULT IN INABILITY TO COMPLETE A PROPELLANT DUMP (1/1 ABORT)

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMI ASSESSMI NASA FMI	ENT	I	D:		ΑÍ	/29/ RCS- 5-6K	15	85		-1							A D. SEL		[x]	
SUBSYSTI MDAC ID ITEM:					15	RCS 885 ELAY																
LEAD AND	ALY	ST	:		D.	на	RT:	MA	N													
ASSESSMI	ENT	:																				
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C														1								
	HDW/FUNC A											В			4	C					•	
NASA IOA	[3 3	/	1R 1R]		[P P]		[P F]		[]	P]]	x]	*
COMPARE	[/]		[]		[N	J	ļ	[)			[N]	
RECOMMEN	IDA:	ric	NC	s:		(If	d:	if	fer	ent	t 1	fro	om	NAS?	A)							
	[/]		[)		[]	Į.]		(AI	[/QC	′DE] LE	ete.
* CIL RE REMARKS: IOA AGRE									(I	f a	app	pli	ca	-	2		raug raug		[]	

ASSESSMENT ASSESSMENT NASA FMEA	C DATE: C ID: #:	1/29/88 ARCS-15 05-6KA-	86 2128 - 2			NASA BASE	DATA: LINE [] NEW [X]
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1586 RELAY					
LEAD ANALY	ST:	D. HART	MAN				
ASSESSMENT	•						
CR	ITICALI FLIGHT	TY	REDUND	ANCY	SCREE	NS	CIL
	HDW/FUN		С	ITEM			
] ASA] AOI	2 /1R 3 /3] [] [P]	[F]	[P] []	[X] * []
COMPARE [N /N] [N]	[N]	[N]	[и]
RECOMMENDAT	TIONS:	(If di	fferent	fro	m NAS	A)	
[3 /1R] [P]	[P) (Pj	[D] (ADD/DELETE)
* CIL RETEN	TION R	ATIONALE	: (If a	ppli	cable)	100000	
REMARKS:							re []
REDUNDANCY TO BE EXPEL LOSS OF MAN INABILITY T	PROVIDE LED TO IFOLD TO O COMPL	ED. LOSS MEET LAI CHRUSTERS LETE A PI	S OF AL NDING WI S DURING ROPELLAI	RE-C L REI EIGHT G RTI	DPEN I DUNDAN I CONS LS/TAL JMP (1	T CAUSIN CY PREVI TRAINTS. ABORT (/1 ABORT	COULD RESULT IN
AT MEETING DISCUSSED. WAS RAISED THEREFORE,	DUE TO	DIFFEREN	OPON 11 IT TAMES	IVI. I	1/20/ THE IS: TATION:	88, NSTS SUE (MUI S OF NST	22206 WAS TIPLE FAILURES) S 22206.

ASSESSMEI ASSESSMEI NASA FMEI	T	ID		ARC	9/88 S-19 -6KA	58	7 12	8A-1	L					SA DAT ASELIN NE	E	x]]	
SUBSYSTEM MDAC ID:	M:			ARC 158 REI	37													
LEAD ANA	LYS	T:		D.	HAR	TM	IAN											
ASSESSME	NT:	}																
	CR1		CAL				RE	DUN	DAN	CY	SCR	EEN	S			CIL	M	
	I		JIGH I/FU				A			В			С					
NASA IOA	[3	/1R /3]		[P]	[P]	[[P]		[]	*
COMPARE	[/N]		[N	3	Í	N]	[N]		[]	
RECOMME	NDA	TI	ons:		(If	d	if	fere	ent	fr	om 1	NASA	١)					
	[/]		[]		[]	(]	(A] .DD/D		ETE)
* CIL R	ETE	NT	ION	RAT	MOIT	AI	E:	(11	f a	pp]	ica			DEQUAT		[]	
REMARKS IOA AGR	: EES	s W	ITH	NA	SA F	ME	EA.											

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-158 05-6KA-2	8 128A-2		NASA DATA: BASELINE NEW	
30DDIDIDIA	ARCS 1588 RELAY				
LEAD ANALYST:	D. HARTN	IAN			
ASSESSMENT:					
		REDUNDA	NCY SCREEN	IS	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [2 /1R IOA [3 /1R] [P] P]	[F] [P]	[P] [P]	[X] * []
COMPARE [N /] [1	[и]	[]	[N]
RECOMMENDATIONS:	(If d	ifferent	from NAS	A)	
[3 /1F	.] [P]	[NA]	[P] (A	[D] DD/DELETE)
* CIL RETENTION	RATIONAL	E: (If a) ADEQUATE INADEQUATE	[]
REMARKS: NASA FMEA CONSII LOSE CAPABILITY ALL HARDWARE REI	MO CIOCE	373 T.37F	LURES. W	ITH RELAY F UPLED WITH	AILED HIGH, THE LOSS OF

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT ENT EA	' [' I #:	ATE: D:	1/29/ ARCS- 05-6F	/88 -1589 (A-20	-					ASA DASEL	INE				
SUBSYSTIMDAC ID	CIT :			ARCS 1589 RESIS												
LEAD AND	ALY	ST	:	D. HA	RTMA	N.										
ASSESSMI	ENT	:														
	CR	IT F	ICAL LIGH	ITY T	F	EDUN	DANC	CY	SCRI	EENS	s			CII		
	1			NC	A			В			С			ITI	EM	
NASA IOA]	3 3	/3 /3]	[]	[]]]]]	*
COMPARE	[/]	[]	[]	[]		ĺ]	
RECOMMEN	DAI	CIO	ONS:	(If	dif	fere	nt f	ro	m NA	SA)						
	[3	/2R]	[P]	[P)	[P]	(AD	[)D/D] ELE	TE)
* CIL RE	TEN	T)	ON I	RATION	ALE:	(If	app	li	cabl				_			
REMARKS:												EQUAT EQUAT		[]	
THIS FAI POSITION TO FALSE OPERATION	LY	KI	TUONE	JANCY 1	PROV.	IDED.	T_	റട	3 OF	λŤ	T 1	DEDINI	D 3 37	A17		

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/8 ARCS-1	8 590				NA: B	SA DA ASELI N	TA: [NE [NEW []	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1590 RESIST	or,	12K	1/4W							
LEAD ANALYST:	D. HAI	RTMAI	N								
ASSESSMENT:					CCD	FFNS			CIL		
CRITICA	LITY	R	EDUNI	DANCY	SCR	EEND			ITE	A	
FLIG HDW/F	HT UNC	A		В	•	С					
UD#/ I			_	•	1	r	1		[] *	t
NASA [/ IOA [3 /3]	[[]	[j	ί	j		[]	
	•	[1	[]	ί	3		[]	
COMPARE [N /	,)	L	•	_							
RECOMMENDATION:	s: (I	f di	ffere	nt f	rom l	(ASA					
[/		ſ]	[3	[]	(A	[.DD/I] DELE	TE)
* CIL RETENTIO	N RATIO	NALE	: (I	f app	lica	ble) IN	ADEQU ADEQU	JATE JATE	[]	
REMARKS: IOA INCORRECTI SHORT). RLR 1	Y IDENI	IFIE ISTO	D TH	IS RE ANNOT	SIST FAI	OR AS	A F?	AILUF	₹ E (FAI	LED

NASA FM SUBSYST MDAC ID ITEM:	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1591 NASA FMEA #: 05-6KA-2081-1 SUBSYSTEM: ARCS MDAC ID: 1591 ITEM: RESISTOR, 5.1K 1/4W LEAD ANALYST: D. HARTMAN ASSESSMENT:											ELIN	E [x]
			r:	D.	HARTM	AN									
ASSESSM	ENT	':													
		F	LIG		1	REDUI	NDAN	CY	SCI	REENS			CI		
				JNC	F	1		В		(2		IT	EM	
NASA IOA	[3	/3 /3]]]]	[]	[]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DAI	ľIC	ons:	(I	f dif	fere	nt f	ron	ı N	ASA)					
* CIL RE] RATIO	_] (If	-			[P]	(AC	[D/D] ELE	TE)
REMARKS: THIS FAII POSITION. TO FALSEI OPERATION	JUR]	E PF	MAY	CAUSI	E LOSS	OF	ACC	JRA'	ΓE	AI INAI INDIC	:ATTO	TE N OF	mun] E VA MAY MISS	ALVE LEAD SION

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM ASSESSM NASA FM	ENT	' I	D:	1/29/ ARCS-	′88 -1592	!			1	NASA D BASEL	INE]	
SUBSYST				ARCS 1592 RESIS	TOR,	5.1F	(1/4	ıw						
LEAD AND	ALY	ST	:	D. HA	RTMA	N								
ASSESSMI	ENT	:												
	CR	IT F	ICAL LIGH	ITY	R	EDUND	ANCY	SCRE	ENS			CIL		
	1			NC	A		B	,	C	:		ITE	M	
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	(N	/N]	[]	[]	[]		[]	
RECOMMEN	DA'	ric	ons:	(If	dif	feren	t fr	om NA	SA)					
	[/]	[]	[]	[]	(AD	[D/DE] ELE	TE)
* CIL RE	TEN	T]	ON F	RATION	ALE:	(If a	appl	icable						
REMARKS:									INA	DEQUAT DEQUAT	Έ	[]	
IOA INCO	RRE RI	CI R	LY I	DENTIF RESIS	TIED TORS	THIS CANN	RES:	ISTOR	AS A	A FAIL	URE	(FA	LI.	ED

ASSESSMEN ASSESSMEN NASA FME	\mathbf{T}	ID	:	ARG	:S-1	59	3 08	3-1							SA DATA: ASELINE NEW	[]		
SUBSYSTEM MDAC ID:				ARG 159 RES	93	OR	١,	1.2K	2W	ī										
LEAD ANA	LYS	T:		D.	HAR	TM	IAN	İ												
ASSESSME	NT:	;																		
	CR]		CAL				RE	:DUNDA	N	CY	5	SCREE	NS	3			IL TEN	1		
	I		LIGH'				A			В				С						
NASA IOA	[2	/1R /3]		[P]	[F]] [P]	[X]	*	
COMPARE	[N	/N]		[N	3	[N	•	3	[N	1	[N]		
RECOMMEN	IDA'	ΤI	ons:		(If	đ	if	feren	t	fr	0	m NAS	A)						
	[3	/2R	.]		[P]	[P	•]	[P) (A		D D/D		ETE)
* CIL RI	ETE	NT	ION	RAT	CION	AL	E:	(If	ap	pl	i	cable		A	DEQUATE DEQUATE		:]		
REMARKS NASA FMI LOSS OF PROVIDE VALVE C	EA AC	:CU	RATI		NDIC	TA:	LU IO	N OF	TH HT	LE: N	V An	ATAR	P AD	US T	FAILURE ITION. O FALSEI RATIONS	ZX.				_

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FMEA	T ID	re:	1/29/ ARCS- 05-6K	100	3-2			NA E	ASA DA BASELI N	TA: NE [EW [x]
SUBSYSTEM MDAC ID:	l:		ARCS 1594 RESIS	STOR,	1.2K	2W						
LEAD ANA	LYST:		D. H	ARTMA	N							
ASSESSME	NT: CRITI	[CA]	TTY	R	EDUNI	DANCY	SCRI	EENS			CIL ITE	4
	FI	LIGI W/F	ΙT	A		В	,	C	:			
NASA IOA	[3		_	[]	[]	[]		[] *
COMPARE	[/	1	[]	[]	[]		[]
RECOMME	NDATI	ONS	: (rf di	ffere	ent f	rom N	IASA)				
0]	ſ	3	[1	[1	(A	[.DD/I) DELETE)
* CIL R	ETENT	[OI	RATI	ONALE	: (I:	f app	lical	ole) IN	ADEQU IADEQU	ATE ATE	[]
REMARKS NO DIFE	: EREN	CES										

SUBSYSTEM: MDAC ID:	ARCS-1595 05-6KA-2083-1 ARCS 1595	NASA DATA: BASELINE [] NEW [X]
	RESISTOR, 1.2K 2W	
LEAD ANALYST:	D. HARTMAN	
ASSESSMENT:		
CRITICALI FLIGHT		CIL
	IC A B C	
NASA [2 /1R IOA [3 /3] [P] [F] [P	'] [x]*
COMPARE [N /N] [и] [и] [и	
RECOMMENDATIONS:	(If different from NASA)	
[3 /2R]] [P] [P] [P] [D] (ADD/DELETE)
* CIL RETENTION RA	ATIONALE: (If applicable)	(1125) BEHETE)
REMARKS: NASA FMEA CONSIDER LOSS OF ACCURATE I	AD	TION DEDITION
		RIIONS.
AT MEETING WITH SUI DISCUSSED. IT WAS WAS RAISED DUE TO I THEREFORE, THIS ISS	BSYSTEM MANAGER ON 1/20/88, AGREED UPON THAT THE ISSUE DIFFERENT INTERPRETATIONS OF SUE REMAINS OPEN.	NSTS 22206 WAS (MULTIPLE FAILURES) NSTS 22206.

ASSESSMENT ASSESSMENT NASA FMEA	ID:	1/29/8 ARCS-1 05-6K		3-2			NA E	SA DA' BASELI N	TA: NE [EW [x]	
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1596 RESIS			2W						
LEAD ANALY	ST:	D. HA	RTMAI	N							
ASSESSMENT CF	RITICA	LITY	R	EDUNI	ANCY	SCRE	ENS		_	IL TEM	
	FLIG HDW/F	HT UNC	A		В		C	:			
NASA IOA	[3 /3 [3 /3	_	[]	[[]	[[]	[] *
COMPARE	[/	1	[]	[]	[]	•	•]
RECOMMEND	ATIONS	s: (I	f di	ffere	nt f	com N	ASA)				
KZGG		1	ί	3	ſ	1	(]	(AD	[D/D] ELETE)
* CIL RET	rentio	N RATIC	NALE	: (Ii	f app	licak	ole) IN	ADEQU IADEQU	ATE ATE	[]
REMARKS:	RENCES										

NASA FM SUBSYST MDAC ID ITEM:	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1597 IASA FMEA #: 05-6KA-2082-1 SUBSYSTEM: ARCS IDAC ID: 1597 TEM: RESISTOR, 5.1K 1/4W EAD ANALYST: D. HARTMAN SSESSMENT: CRITICALITY REDUNDANCY SCREEN									NASA BAS	A DAT SELIN NE	E [x]	
112020011	DIA I	•												
		F	LIG	IT		REDUN	DANC	CY S	CREEN	s		CI	_	
				INC		A		В		С		IŢ	EM	
NASA IOA	[3	/3 /3]	[[]	[]]]		[] ,	+
COMPARE	[/		[[ι]		[]	
RECOMMEN	DAI	PIC	ONS:	(I1	dii	ffarav	,+ £.							
]					[РJ	(AI	[D/D] ELET:	E)
* CIL RE	ren	T]	ON I	RATION	ALE:	(If	app]	ica	ble)					-,
REMARKS: THIS FAII POSITION. TO FALSEI OPERATION	UR	E DF	MAY	CAUSE	Los	S OF	ACCU	RAT:	IN. E IND:	ADEQUA ADEQUA ICATIO L REDU LY EFF	ATE	ים יים] E VAI MAY I MISSI	LVE LEAD ON

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMI ASSESSMI NASA FMI	ENT	I	D:	AR	CS-1	598					nasa Basi	ELINE	: [[x]	
SUBSYSTI MDAC ID: ITEM:				AR 15 RE	98	OR,	5.1	K 1/4	W						
LEAD AND	ALYS	ST	:	D.	HAR	rmai	N								
ASSESSMI	ENT:	:													
	CR		ICAL LIGH			RI	EDUN	DANCY	SCR	REEN	S		CIL	a.	
	I		W/FU			A		В	3		С		IIEr	1	
NASA IOA	[3	/3 /3]		[]	[]	[]		[]	*
COMPARE	[/]		[]	[]	[]		[]	
RECOMMEN	NDA!	ΓI	ons:		(If o	difi	fere	nt fr	om N	IASA)				
	[/]		[]	[]	[]	(A	[DD/DI		TE)
* CIL RI		YT:	ION	RAT:	IONA	LE:	(If	appl	icab	•	ADEQU NADEQU		•]	
REMARKS: A SHORT RECOMMEN	ACI													FM	EA.

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	NASA DATA: BASELINE NEW									
SUBSYSTEM:	ARCS 1599 RESISTOR, 1									
LEAD ANALYST:	D. HARTMAN									
ASSESSMENT:										
CRITICAL: FLIGHT		DUNDANCY SCREENS	3	CIL ITEM						
	NC A	В	С							
NASA [2 /1R IOA [3 /3] [P]	[F] [P]	[X] * []						
COMPARE [N /N] [N]	[N]	и]	[N]						
RECOMMENDATIONS:	(If diffe	erent from NASA)								
[3 /2R] [P]	[P] [[D] DD/DELETE)						
* CIL RETENTION 1	RATIONALE: ((If applicable) IN	ADEQUATE	[]						
ADEQUATE [] INADEQUATE [] REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.										
AT MEETING WITH S DISCUSSED. IT WE WAS RAISED DUE TO	AS AGREED UP	PON THAT THE ISS	SUE (MULTI)	PLE FAILURES)						

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	ID:	ARG	CS-1600))83-	·2			NASA BAS	ELIN) X]	
SUBSYST MDAC ID ITEM:			ARC 160 RES		1.	2K 2W					•	j	
LEAD AN	ALY	ST:	D.	HARTMA	N								
ASSESSMI	ENT	:											
	CR:	ITICAI FLIGH		R	EDU	NDANC:	Y SCI	REENS			CI		
	I	HDW/FU	JNC	A		1	В	•	2		IT:	EM	
NASA IOA]	3 /3 3 /3]]]	[]	[]		[]]	*
COMPARE		/		£]	[]	[]		[]	
RECOMMEN	DAT	CIONS:	(If dif	fere	ent fr	om N	(ASA)					
	(/]	[]	[]	[1	(A	[DD/[] DELE:	TE)
* CIL RE	TEN	TION	RATIO	ONALE:	(If	appl	icab	le)					
REMARKS:								A	DEQU.		[]	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-160	ARCS-1601 05-6KA-2082-1 ARCS 1601								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1601 RESISTOR	, 5.1K	1/4W							
LEAD ANALYST:	D. HARTM	IAN								
ASSESSMENT:										
CRITICAL		REDUNDA	NCY :	SCREE	NS		CIL ITEN	1		
FLIGH HDW/FU										
NASA [3 /3 IOA [3 /3] []	[[]	[]	[] *		
COMPARE [/	j [1	[1	[1	ĺ]		
RECOMMENDATIONS	(If d	ifferent	fro	m NAS	SA)					
[3 /2]	R] [P]	[P]	[P] (A	DD/D] ELETE)		
* CIL RETENTION	RATIONAL	E: (If a	appli	cable	n.	DEQUATE DEQUATE]		
REMARKS: THIS FAILURE MA POSITION. REDU	NUNNICO DD	OUTDED.	LOS	SS Ur	ALL	CATION C REDUNDA	71.CT			

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

OPERATIONS.

ASSESSMEN ASSESSMEN NASA FMEA	DA ID	TE:	1/29 ARCS 05-6	/88 -1602 KA-208				ASA I BASEI	ATA: LINE NEW]		
SUBSYSTEM MDAC ID:				ARCS 1602 RESI		5.1	K 1/4W	ī					
LEAD ANA	LYS	T:	:	D. H	ARTMAI	N							
ASSESSME	NT:	:											
	CRITICALITY REDUNDA											CIL	
	FLIGHT HDW/FUNC A B C												
NASA IOA	[3	/3 /3]	[]	[[]	[]		[
COMPARE					ί]	[]	[]		[]
RECOMMEN	ΙDΑ	TI	ONS	: (If dif	fere	ent fr	om	NASA)				
							ί]	(A)] DELETE)
* CIL RI	ETE	:NT	'ION	RATI	ONALE:	: (I:	f appl	ica		ADEQI ADEQI	JATE JATE	[]
REMARKS A SHORT IOA REC FMEA.	INADEQUATE [] REMARKS: A SHORT ACROSS A RLR TYPE RESISTOR IS NOT A CREDIBLE FAILURE. IOA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FROM THIS FMEA.												
ISSUE R (SHORT	ES(FA:	IT! DF/	VED URE	ON 1/ MODE	'20/88 TO BE	AT REM	MEETII (OVED)	NG V	WITH S	UBSY	STEM	MAN.	AGER

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1603 NASA FMEA #: 05-6KA-2081-1 SUBSYSTEM: ARCS											DATA ELINI NEV	Ε [x]	
SUBSYST: MDAC ID ITEM:	EM:			ARC 160 RES	03	R, 1	2K 1/	4W						
LEAD AND	ALY	SI	!:	D.	HART	MAN								
ASSESSMI	ENT	:												
	CR		ICAL LIGH			REDU	JNDAN(CY SC	REENS			CI	L	
]		W/FU	_		A		В	(С		ΙΊ	EM	
NASA IOA	[3 3	/3 /3]]]	[]	[]		[]	*
COMPARE			/			J	ĺ]	Ĺ			[)	
RECOMMEN	'DA'I	CIC	ons:	(If di	iffer	ent f	rom 1	NASA)					
					[_			[I	P]	(Al) DELE	TE)
* CIL RE	TEN	T]	ON F	RATIO	ONALE	: (I	f app	licak						
REMARKS:									INA	DEQU	ATE ATE	Ī]	
THIS FAIR POSITION TO FALSE OPERATION														

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	NT :	ID:	ARCS	-1604							
SUBSYSTE MDAC ID:			ARCS 1604 RESI		12K	1/4W					
LEAD ANA	LYS'	r:	D. H	(ARTMA	N						
ASSESSME	NT:										
		TICAL FLIGH		R	EDUN	DANCY	SCR	EENS		CII	
		DW/FU		A		31.1					
NASA IOA	[:	3 /3 3 /3]	[]	[]	[[]	[[] *]
COMPARE	[/]	[]	[]	[]	[]
RECOMMEN	DAT:	ions:	(1	f dif	fere	nt fr	om N	(ASA)			
	[/]	[1	[]	[] (] DELETE)
* CIL RE	TEN'	TION	RATIO	NALE:	(If	appl	icab	P	DEQUATE]
NO DIFFE	REN	CES.									

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-160 05-6KA-2	5 081-1				ASA DATA BASELINE NEW	-	:]			
SUBSYSTEM:	ARCS 1605 RESISTOR			W							
LEAD ANALYST:	D. HARTM	IAN									
ASSESSMENT:											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM											
NASA [3 /3 IOA [3 /3] [A B C									
COMPARE [/] []	[]	[]	[]			
RECOMMENDATIONS:	(If di	fferent	t fr	om NA	SA)						
[3 /2R] [P]	[P]	[P		[DD/D] ELETE)			
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE []											
INADEQUATE [] REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION											

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMENT ASSESSMENT NASA FMEA	ID:	1/29/8 ARCS-1	NEW [X]								
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1606 RESIST	OR,	5.1K	1/4W	ı		·			
LEAD ANALY	ST:	D. HAR	TMAN	Ī							
ASSESSMENT	?:										
CRITICALITY REDUNDANCY SCREENS CIL ITEM											
FLIGHT HDW/FUNC A B C											
NASA [IOA [[/ [3 /3]	[]	[]	[]	[] *]	
COMPARE	[и /и	1	[]	[1	[]	[]	
RECOMMENDA	ATIONS:	(If	dif	feren	t fr	om NA	SA)				
	(/		[]	[]	[] (2	[ADD/E] ELETE)	
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
REMARKS: IOA INCORRECTLY IDENTIFIED THIS RESISTOR AS A FAILURE (FAILED SHORT). RLR TYPE RESISTORS CANNOT FAIL SHORT.											

6

ASSESSM ASSESSM NASA FM	EN' EN' EA	r : r :	DATE [D:	1/2 ARC 05-	29/88 CS-160 -6KA-2)7 2086–	1			NASA DATA: BASELINE [] NEW [X]				
SUBSYSTIMDAC ID:	EM:	:		ARC 160	:s 7		lK 1/							
LEAD ANA	AL 3	'SI	!:	D.	HARTM	IAN								
ASSESSME	ENT	: :												
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
		HD	W/FU	NC	•	A	F	3	c	:	11	EM		
NASA IOA	[3 3	/3 /3]	[[]	[]]]]];	*	
COMPARE	[/]	(]	[]	ĵ.	1	[]		
RECOMMEN	DA	TI	ONS:	()	f di	ffere	nt fr	om 1	NASA)					
									[P		[ADD /1] DELET	E)	
* CIL RE	ΓEI	IT.	ON 1	RATIC	NALE:	(If	appl	icab						
REMARKS:									INA	DEQUATE DEQUATE	į	•		
TO FALSE	THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE COSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD PERATIONS.													

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM	ESSMENT DATE: 1/29/88 NASA DATA: ESSMENT ID: ARCS-1608 BASELINE [NEW [X]		
SUBSYST MDAC ID ITEM:			ARCS 1608 RESIS	TOR,	5.1F	C 1/4	IW						
LEAD AND	ALYSI	r:	D. HA	RTMA	N								
ASSESSMI	ENT:												
	CRIT	'ICAL 'LIGH	ITY	R	EDUND	ANCY	SCRE	ENS			CIL		
			NC	A B C									
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	[N	/N	J	[]	[]	[]		[)	
RECOMMEN	IDATI	ons:	(If	dif	feren	t fr	om NA	SA)					
	[/]	[]	[]	[1	(AI	[DD/D		TE)
* CIL RE	TENT	ION I	RATIONA	LE:	(If	appl	icabl						
REMARKS:								A INA	DEQUA DEQUA	TE TE	[]	
IOA INCO SHORT).	RREC	TLY]	DENTIF RESIS	TED TORS	THIS CAN	RES NOT	ISTOR FAIL	AS SHOR	A FAI T.	LURE	(F2	AIL	ED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1609	4-1	NASA DATA: BASELINE NEW								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1609 RESISTOR,	1.2K 2W									
LEAD ANALYST:	D. HARTMAN	ī									
ASSESSMENT:											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM											
FLIGH HDW/FU		В	С	11							
NASA [2 /1R IOA [3 /3	[P] [F]] []	[P] []	[X] *							
COMPARE [N /N] [N] [N]	[N]	[N]							
RECOMMENDATIONS:	(If diff	ferent from NAS	A)								
[3 /2F	[P] [P]	[P] (A	[D] DD/DELETE)							
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.											

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1610 NASA FMEA #: 05-6KA-2084-2								NASA DATA: BASELINE [] NEW [X]							
SUBSYST	:		ARC 161 RES		1.	2K 2W										
LEAD AND	ALYS	ST:	D. 1	HARTMA	N											
ASSESSMI	ENT:	:														
	CRI	TICAI FLIGH		R	EDU	NDANC	Y SCI	REENS			CI					
	F	IDW/FU		A		I	3	(2		IT	EM				
NASA IOA	[3 /3 3 /3]	[]	[]	[]		[]	*			
COMPARE	ſ	/]	[]	[]	[]		[]				
RECOMMEN	DAT	'IONS:	(1	f dif	fere	ent fr	om N	ASA)								
	[/]	[]	[]	[]	(A	[DD/E		TE)			
* CIL RE	TEN	TION	RATIC	NALE:	(I1	f appl	icab	le)								
REMARKS:									DEQU DEQU		[]				
NO DIFFE	REN	CES.														

ASSESSMENT ASSESSMENT NASA FMEA	r ID:	ARCS-1	ARCS-1611 BASELINE 05-6KA-2086-1 NEW								
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1611 RESIST	or,	5.1K	1/40	1					
LEAD ANAL	YST:	D. HAF	(AMT)	1							
ASSESSMEN'	T:										
CRITICALITY REDUNDANCY SCREENS FLIGHT										M	
	HDW/FU		IC A B C								
NASA IOA	[3 /3 [3 /3							[] *		
COMPARE	[/]	[1	[1	[]	[]	
RECOMMEND	: SMOITA	(If	dif	feren	t fr	om NA	SA)				
	[3 /2]	R]	[P]	[P]	[:	P] (2	[ADD/D] ELETE)	
* CIL RET	TENTION	RATION	ALE:	(If	appl	icabl		ADEQUATE ADEQUATE	-]	
REMARKS: THIS FAII	LURE MA	Y CAUSE	LOS	S OF	ACCU	RATE	IND	ICATION (OF TH	E VALVE MAY LEA	

POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-10	ARCS-1612 NEW [X] ARCS									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1612 RESIST	OR,	5.1K	1/4W	ı						
LEAD ANALYST:	D. HAR	TMAN	Ī								
ASSESSMENT:											
CRITICALITY REDUNDANCY SCREENS CIL ITEM											
FLIGHT HDW/FUNC A B C											
NASA [/ IOA [3 /3		[]	[]	[]	[] *]		
COMPARE [N /N		[ſ		[[]		
RECOMMENDATIONS	: (If	dif	feren	t fr	om NA	SA)					
]] (2	[DD/D] ELETE)		
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
REMARKS: IOA INCORRECTLY IDENTIFIED THIS RESISTOR AS A FAILURE (FAILED SHORT). RLR TYPE RESISTORS CANNOT FAIL SHORT.											

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: LEAD AND	EM: EM:	r # :	ID:	ARCS 05-6 ARCS 1613 RESI	5-161 5KA-2 5 5 5 5 5 5 5 5	085- , 5.	·1 1K 1/	4W		ASA DAT BASELII NI	NE [x]
	CR		'ICAI 'LIGH	ITY T	F	REDUI	NDANC	Y S	CREENS		CI	L
	1	HD	W/FU	NC	A]	В	С			EM
NASA IOA	[3	/3 /3]	[]	[]	[]	[] *
COMPARE	[/]]	[]]	[]
RECOMMEN	DAT	?IO	ons:	(If	dif	fere	nt fr	om	NASA)			
	[3	/2R]	[P]	[P]	[P		[DD/[] DELETE)
* CIL RET	ren	T]	ON F	NOITAS	ALE:	(If	appl	ical				·
REMARKS:	IID	_	300.00						INADE	EQUATE EQUATE]]
POSITION. TO FALSEI OPERATION	THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.											

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM ASSESSM NASA FM	ENT ENT EA	' D' I #:	ATE:	1/2 ARC 05-	9/88 S-161 6KA-2	4 085-	1		N		DATA ELINE NEW) x]	
SUBSYST	EM:			ARC 161 RES	4	, 5.	1K 1/4	١₩						
LEAD AND	ALY	ST	:	D. 1	HARTM	AN								
ASSESSMI	ENT	:												
		F	LIGH	T			NDANCY	sc	REENS			CII	_	
		HD	W/FU	NC	2	7	В	3	С					
NASA IOA	[3	/3 /3]	[]	[]	[[]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DA:	ric	ons:	(1	f dif	fere	nt fr	om 1	NASA)					
	Į		/	1.	[]	[1	[]	1 A)	[DD/D] ELE:	ΓE)
* CIL RE	TEN	T]	ON :	RATIC	NALE:	(If	appl	icak						
REMARKS:									INAI	EQU	ATE	-	-	
A SHORT IOA RECO FMEA.	ACF MME	NE	S A S RI	RLR EMOVA	TYPE L OF	RESI THE	STOR :	IS N	NOT A C	RED MO	IBLE DE FR	FAI OM	LURI THIS	Ξ.
ISSUE RE	SOL AIL	VE UR	D ON	N 1/2	0/88 . O BE :	AT M	EETING VED).	S WI	TH SUE	SYS	TEM M	ANA	GER	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/8 ARCS-1 05-6KA	615	5-1				SA DATA BASELINE NEW]			
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1615 RESIST	OR,	5.1K	1/4V	1							
LEAD ANALYST:	D. HAR	TMAN	ſ									
ASSESSMENT:												
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HDW/FINC A B C												
HDW/FU			С									
NASA [3 /3 IOA [3 /3]	[]	[]	[]	[] *			
COMPARE [/]	[1	[]	[]	[]			
RECOMMENDATIONS:	(If	dif	ferent	fr	om NA	SA)						
[_. 3 /2F	2]	[P	3	[P	1	[P] (2	[DD/E] ELETE)			
* CIL RETENTION	RATION	ALE:	(If a	appl	icabl	A	DEQUATE DEQUATE]			
REMARKS: THIS FAILURE MAY POSITION. REDUITO FALSELY FAIL	TONNOV	ひひへひ	TDED.	1.0	SS OF	ALL	REDUNDA	TI CI	LIVI TRUE			

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMEN ASSESSMEN NASA FMEA	IT ID:	1/29/8 ARCS-1 05-6KA	616	35-1				SA DAT. ASELIN NE]
SUBSYSTEM MDAC ID:		ARCS 1616 RESIST	or,	5.1K	1/41	N				
LEAD ANA	LYST:	D. HAF	(AMT	N						
ASSESSME	NT:									
	CRITICAL		R	EDUNI	DANCY	SCI	REENS		CIL	
	FLIGH HDW/FU		A		В		С			
NASA IOA	[3 /3 [3 /3]	[]	[[]	[]	[] *
COMPARE	[/	1	[]	[)	[]	[]
RECOMMEN	DATIONS	(If	dif	fere	nt fr	om	NASA)			
	[/]	[]	[]	[]	[(ADD/D] ELETE)
* CIL RI	ETENTION	RATION	ALE:	(If	appl	lica	21	DEQUAT DEQUAT]
REMARKS A SHORT IOA REC FMEA.	ACROSS	A RLR T REMOVAI	YPE OF	RESI THE	STOR SHO	IS RT"	NOT A FAILUF	CREDIB RE MODE	LE FAI	LURE. THIS

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSM ASSESSM NASA FM	ENT EA	[] :#	D:	ARCS: 05-61	85-1					ì	NASA BASE		[) X]			
SUBSYSTI MDAC ID ITEM:	LM:			ARCS 1617 RESIS													
LEAD AN	ALY	ST	:	D. H2	ART	MAI	V										
ASSESSME	ENT	:															
		F	LIGH	_		RE	EDUNI	OANC	CY	SCF	REEN	IS			CII		
		HD	W/FU	NC		A			В			С			ITI	ZM	
NASA IOA	[3 3	/3 /3]	[]	[]	[]		[]	*
COMPARE	[/]	[]	[]	(]		[]	
RECOMMEN	DAT	ric	ons:	(If	di	ff	eren	t f	ro	om N	ASA)					
]	_])		P]	(AD	[D/D] ELE	TE)
* CIL RE	TEN	T	ON F	MOITAS	ALE	:	(If	app	li	cab:	le)						
REMARKS:		_										NAC	EQUA'	ΓE	_]	
THIS FAID POSITION. TO FALSE	-		~~	4241	UAT	v , ,	JP. 11.	1.3	, -	e ai	ו אדיים	DIC	ATIO	N OF	THI CY I	E V May	ALVE LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

ASSESSMI ASSESSMI NASA FMI	EN	T]	D:	ARC	S-161	8 085–:	1			NASA DAT BASELIN NE			
SUBSYSTI MDAC ID: ITEM:		:		ARC 161 RES		, 5.:	1K 1/	4W					
LEAD ANA	AL	YSI	:	D.	HARTM	AN							
ASSESSME	EN'	r:											
	CI	F	LIG	LITY		REDUN	NDANC!	Y SCI	REENS		CI	-	
		HD	W/F	UNC	7	4	1	3	(2			
NASA IOA	 	[3 [3	/3 /3]]]	[]	[]	[[] *]	
COMPARE	(•	/]	[]	[]	[1	[]	
RECOMMEN	DA	TI	ons	: (3	If dif	fere	nt fr	om N	(ASA)				
	[/]	ξ]	[]	[] (2	[ADD/E] DELETE)
* CIL RE	TE	NT	ION	RATIO	NALE:	(If	appl	icab	le)				
REMARKS:			-						A	DEQUATE DEQUATE]	
A SHORT . IOA RECO FMEA.	AC MM	ROS ENI	ss i	A RLR REMOVA	TYPE L OF	RESI THE	STOR "SHOR	IS No.	OT A AILUR	CREDIBLE E MODE F	FAI	LURE. THIS	

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	E: 1/29/3 ARCS- 05-6K	1619					ASA DATA BASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1619 RESIS	TOR,	5.1K	1/4	a .				
LEAD ANALYST:	D. HA	RTMA)	1						
ASSESSMENT:									
	ALITY	R	EDUND	ANCY	SCRE	ENS		CIL	M.
	GHT FUNC	A		В		С			
NASA [3 , IOA [3 ,	/3] /3]	[[]	[]]]	[] *]
COMPARE [/]	C]	[]	[]	[]
RECOMMENDATIO	NS: (If	dif	feren	t fr	om NA	SA)			
[3	/2R]	[P	1	[P]	[P	(2	[ADD/D] ELETE)
* CIL RETENTI	ON RATION	VALE:	(If	appl	icabl	A	DEQUATE]
REMARKS: THIS FAILURE	MAY CAUS	E LOS	S OF	ACCU	IRATE SS OF	INDI	CATION (OF TH	E VALVI MAY LEA

REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMEN ASSESSMEN NASA FMEA	T	ID	TE:	1/2 ARC	9/88 S-1620						DATA: LINE NEW			
SUBSYSTEM MDAC ID:				ARC 162 RES		5.1F	(1/4)	M						
LEAD ANAI	ZYS	T:		D.	HARTMAN	•								
ASSESSMEN	1T:	;												
(CRI			ITY	RE	DUNI	DANCY	SCF	REENS			CIL		
	I		LIGH V/FU	T NC	A		В	•	C					
NASA IOA	[3	/]	[]	[]	[]		[]	*
COMPARE					C		[[3		[]	
RECOMMEN	DA'	TI	ons:	;	(If dif:	fere	nt fr	om 1	NASA)					
			/		[3	(A)	[DD/I	DELF	ETE)
* CIL RE	TE:	NT	ION	RAT	IONALE:	(If	app]	Lica	4		JATE JATE]	
REMARKS: IOA INCO SHORT).	RR	EC	TLY TY	IDE PE R	NTIFIED ESISTOR	THI S CA	S RES	SIST FAI	OR AS L SHO	A FA	AILUR	E (FAI]	ĹED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-16 05-6KA-	21 2084-1		NASA DAT BASELIN NE	
SUBSYSTEM: MDAC ID:	ARCS 1621	R, 1.2K 2			•
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
CRITICAL FLIGH	ITY r	REDUNDAN	CY SCRE	ENS	CIL
	4C	A	В	С	ITEM
NASA [2 /1R IOA [3 /3] [P] [F]	[P] []	[X] *
COMPARE [N /N] [N] [n j	[N]	[N]
RECOMMENDATIONS:	(If di	fferent	from NAS	SA)	
				(A	[D] DD/DELETE)
* CIL RETENTION R	ATIONALE	: (If app	olicable	2)	
REMARKS:				ADEQUATE INADEQUATE	ĺ
NASA FMEA CONSIDE LOSS OF ACCURATE PROVIDED. LOSS O VALVE CLOSED, POS	F ALL PR	ON OF THE	VALVE	POSITION. I	
AT MEETING WITH SI	JBSYSTEM	MANAGER	ON 1/20	/88, NSTS 22	2206 WAS

DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT 1	ID:	ARCS-	1622		!]	NASA BASE	LINE	-]	
SUBSYSTE MDAC ID: ITEM:			ARCS 1622 RESIS	TOR,	1.2	K 2W							
LEAD ANA	LYST	r:	D. HA	RTMA	N								
ASSESSME	NT:												
			ITY	R	EDUN	DANC	SCR	REENS			CII		
		FLIGH DW/FU		A		F	3	(С		ITE	iM.	
NASA IOA	[3	3 /3]	[[]	[]	[]		[]	*
COMPARE	[/]	[1	[]	[]		[)	
RECOMMEN	DATI	ONS:	(If	dif	fere	nt fr	om N	ASA)					
	[/]	[]	. []	[]	(A)	[DD/D] ELE	ΓE)
* CIL RE	TENT	CION	RATION	ALE:	(If	appl	icab	7	ADEQU.		Ĺ]	
REMARKS:	RENC	CES.						INA	ADEQU.	HIL	ι]	

ASSESSME ASSESSME NASA FME	NT II):	ARCS-	1623				_	ASA DA BASELI N		:]			
SUBSYSTE MDAC ID:			ARCS 1623 RESIS	ror,	5.11	K 1/4	W							
LEAD ANA	LYST:	1	D. HA	RTMA	N									
ASSESSME	ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
FLIGHT ITEM														
COMPARE	[/]	[]	[]	[1	E]			
RECOMMEN	DATIC	ons:	(If	dif	fere	nt fr	om N	ASA)						
	[3	/2R] .	[P)]	[])	[P]] DELETE))		
* CIL RE	TENT	ON	RATION	ALE:	(If	app]	licab	A	DEQUAT DEQUAT]			
REMARKS: THIS FAI POSITION	LURE		CAUSE					INDI	CATION	OF TH				

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

ASSESSM ASSESSM NASA FM	ENT	I	D:	AR	CS-1624		L		1	NASA BASE	DATA LINE NEW	[x]	
SUBSYST MDAC ID ITEM:				ARC 16: RE		5.1	K 1/4	1W						
LEAD AN	ALY	ST	:	D.	HARTMA	M								
ASSESSM	ENT	:												
	CR				F	REDUN	IDANC	SCR	EENS			CI		
	CRITICALITY REF FLIGHT HDW/FUNC A							3	(2		IT	EM	
NASA IOA	[[3	/3 /3]	[]	[]	[]		[] *	
COMPARE	[/]	ſ]	[]	. []		[]	
RECOMME	NDA'	TI(ONS	:	(If dif	fere	ent fi	com N	ASA)					
	[/]	[]	[]	[]	(A)	[DD/] DELET	Ε)
* CIL R		NT:	ION	RAT	IONALE:	(If	appl	licab	1	ADEQU ADEQU]	

NO DIFFERENCES.

ASSESSME ASSESSME NASA FME	NT	I	D:	ARC	CS-16	25	34-1	L					ASA DASEL		[x]	
SUBSYSTE MDAC ID:				ARG 162 RES		R,	1.2	2K 21	W									
LEAD ANA	LY	ST	:	D.	HART	MAI	N											
ASSESSME	NT	:																
	CR:					RI	EDUN	IDAN(CY	SCF	REENS	S			C]		,	
	1		LIGH W/FU	_		A			В			С			1.1	EM	l	
NASA IOA			/1R /3]]	P]	[F]	[P]		[X] *]	
COMPARE	[N	/N]	[N]	[N]	[N]		[N]	
RECOMMEN	'DA'	TI(ons:	((If d	if:	fere	ent	fro	om N	IASA))						
	[3	/2R]	C	P]	[P]	[P]	(Al		D DE] :LET	E)
* CIL RE	TE	NT:	ION	RAT]	ONAL	E:	(If	ap	pl:	icak	•		DEQUA' DEQUA'		[]	
REMARKS: NASA FME LOSS OF											TH:	IS	FAIL	URE	MA	Y	•	

PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME NASA FME	NT I	D:	ARCS-	1626				3	NASA BASE	LINE	-	(]
SUBSYSTE MDAC ID: ITEM:	M:		ARCS 1626 RESIS	TOR,	1.2	C 2W						
LEAD ANA	LYSI	?:	D. HA	RTMA	N							
ASSESSME	NT:											
		'ICAL 'LIGH'		R	EDUND	ANCY	scr	EENS			CII	
		W/FU		A		E	3	(ITE	LM
NASA IOA	[3	/3]	[]	[[]	[[]		[] *]
COMPARE	[/]	[]	[]	[]		[]
RECOMMEN	DATI	ons:	(If	dif	feren	t fr	om N.	ASA)				
	[/]	[]	[]	[]	(A)	[DD/D] ELETE)
* CIL RE	TENT	I NOI	RATION	ALE:	(If	appl	icab	P	DEQU		[]
REMARKS: NO DIFFE	RENC	ES.							~		•	•

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	1/29/8 ARCS-1 05-6KA	627					ASA DATA BASELINE NEW	-]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1627 RESIST	OR,	5.1K	1/4	N				
LEAD ANALYST:	D. HAR	TMAN	Ī						
ASSESSMENT:									
CRITIC		RE	DUND	ANCY	SCRE	ENS		CIL	
FLI: HDW/		A		В		С		# I I	P1
NASA [3 / IOA [3 /	B]	[]	[]	[]	[[] *
COMPARE [/]	[]	£]	[]	[]
RECOMMENDATION	S: (If	diff	erent	t fr	om NA	SA)			
[3 /	2R]	[P	3	[P]	[P		[DD/D] ELETE)
* CIL RETENTIO	N RATIONA	ALE:	(If a	appl	icabl	A	DEQUATE	[]
REMARKS: THIS FAILURE M	AY CAUSE								

POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	NT	II							ı		DATA: LINE NEW	[
SUBSYSTEMDAC ID:				AR 16 RE		5.	1K 1/4W	i						
LEAD ANA	LY	ST	:	D.	HARTMAN	ī								
ASSESSME	NT	:												
	CR:		ICAL		RI	EDU	NDANCY	sc	REENS			CII		
	1		LIGH W/FU		A		В		(2		111	.I.I	
NASA IOA	[3	/3]	[]	[]	[[]				*
COMPARE	[N	/N]	[]	[]	[]		[)	
RECOMMEN	DA'	TI	ons:		(If dif	fer	ent fro	om	NASA)					
	[/]	[]	[]	[]	(A)	[DD/I) DELE	ETE)
* CIL RE	TE	NT	ION	RAI	CIONALE:	(I	f appl:	ica	ble) IN	ADEQU ADEQU	ATE	[]	
REMARKS: IOA INCO SHORT).	RR	EC LR	TLY TYF	IDE E F	NTIFIED RESISTOR	TH S C	IS RES	IST FAI	OR AS	A FA	LUR	E (1	FAII	LED

ASSESSMENT DA ASSESSMENT II NASA FMEA #:	ATE: 1/29 D: ARCS 05-6	CS-1629 BASELINE [] -6KA-2085-1 NEW [X]									
SUBSYSTEM: MDAC ID: ITEM:	1629	•		K 1/4							
LEAD ANALYST	D. H	ARTMA	N								
ASSESSMENT:											
	CALITY	F	EDUN	DANCY	SCF	REENS			IL.		
	IGHT /FUNC	ITEM									
NASA [3 IOA [3	/3] /3]	[]]]	[]	[] *]		
COMPARE [/]	[3	[]	[]	[]		
RECOMMENDATIO	NS: (I	f dif	fere	nt fr	om N	IASA)					
[3	/2R]	[P	']	[P]	[P]] 'DELET	E)	
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE []											
REMARKS: THIS FAILURE POSITION. RE TO FALSELY FA	DUNDANCY	PROV	IDED	. LO	ss o	INDI	REDUN	OF TOTAL	MAY :	LEAD	

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1630 05-6KA-20					ASA DATA BASELINE NEW		
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1630 RESISTOR,	5.1K	1/4W	ŗ				
LEAD ANALYST:	D. HARTMA	N						
ASSESSMENT:								
CRITICAL		EDUND	ANCY	SCREE	ens		CIL	
FLIGH HDW/FU			В		С		110	
NASA [3 /3 IOA [3 /3] []	[]	[]	[] *]
COMPARE [/] []	[]	[]	[]
RECOMMENDATIONS:	(If dif	feren	t fro	om NAS	5A)			
[/] []	[]	[] (A	[.DD/D] ELETE)
* CIL RETENTION	RATIONALE:	(If	appli	cable	A	DEQUATE DEQUATE	_]
REMARKS: A SHORT ACROSS A IOA RECOMMENDS R FMEA.	RLR TYPE	RESIS THE "	TOR 3	IS NOT	r A (CREDIBLE E MODE F	FAI ROM	LURE. THIS

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMI ASSESSMI NASA FMI	ENI ENI EA	' C' ' I	ATE: D:	1/29, ARCS- 05-61	ARCS-1631 BASEI 05-6KA-2086-1								
SUBSYST	LM:			ARCS 1631 RESIS									
LEAD AN	ALY	ST	':	D. H2	ARTMA	N							
ASSESSMI	ENT	:											
	CR		ICAL LIGH	ITY T	F	EDU	NDANCY	sc	REENS		CII		
				NC	A B C								
NASA IOA]	3 3	/3 /3]	[]	[]	[]]]	*
COMPARE	[/]	[]	ľ]	(]	[]	
RECOMMEN	IDA	TI	ons:	(If	dif	fere	ent fro	om i	NASA)				
	[3	/2R]	[P]	[P]	[P		[DD/I] DELE	TE)
* CIL RE	TE:	NT:	ION 1	RATION	ALE:	(If	appl	ica					
ADEQUATE [] INADEQUATE []													
REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION													
00000							,				~ * * •		O T O 14

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT ASSESSMENT NASA FMEA #	ID:	1/29/8 ARCS-1						SA DATA: ASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1632 RESIST	OR,	5.1K	1/4W	ī				
LEAD ANALYS	ST:	D. HAR	TMAN	ī						
ASSESSMENT:	:									
CRI	TICAL		RE	DUNDA	NCY	SCREE	NS		CIL	4
F	IDW/FUN		A		В		С			
NASA [IOA [3 /3]	[]	[]	[]	[] *
COMPARE [N /N]	[]	[]	[]	[]
RECOMMENDAT	rions:	(If	difi	erent	: fr	om NAS	SA)			
[/]	[]	[]	[) (A	[DD/D] ELETE)
* CIL RETER	NTION 1	RATIONA	ALE:	(If a	appl	icable	Δī	DEQUATE DEQUATE	[}]
REMARKS: IOA INCORRI SHORT). RI	ECTLY :	IDENTII E RESIS	FIED STORS	THIS CAN	RES	ISTOR FAIL S	AS A	A FAILUR		

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1633 05-6KA-20	86-1			ASA DATA BASELINE NEW		
	ARCS 1633 RESISTOR,	5.1K 1/4	w				
LEAD ANALYST:	D. HARTMA	N					
ASSESSMENT:							
CRITICAL		EDUNDANCY	SCREE	NS		CIL	
FLIGH HDW/FU	NC A	E	}	С		ITE	M
NASA [3 /3 IOA [3 /3] [] []	[]	[] *
COMPARE [/] [] []	[]	[]
RECOMMENDATIONS:	(If dif	ferent fr	om NASA	A)			
[3 /2R] [P] [P]	[P	-	[DD/DI] ELETE)
* CIL RETENTION	RATIONALE:	(If appl	icable))			
D=112 DV-2]		EQUATE EQUATE]
REMARKS: THIS FAILURE MAY POSITION. REDUN TO FALSELY FAILI	DANCY PROVI	IDED. LO	SS OF A	\LL	REDUNDAN	ICY I	MAY LEAF

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMEN ASSESSMEN NASA FME	TV	II	ATE:	1/29 ARCS	9/88 5-1634				,	NASA I BASEI		[]	
SUBSYSTEMDAC ID: ITEM:				ARCS 1634 RESI		5.1	K 1/41	Ñ						
LEAD ANA	LYS	T:	:	D. I	IARTMAN									
ASSESSME	NT:	3												
•	CR]				RE	DUN	DANCY	SCF	REENS			CII		
	I		LIGH N/FU		A		В			С				
NASA IOA	[3	/ /3]	[]	[]]]				*
COMPARE	[N	/N]	C]	[]	[]		[]	
RECOMMEN	DA'	ΓI	ONS:	(If diff	ere	nt fr	om 1	NASA)					
	[/	1	ι)	[]	[]	(A)	[DD/I) D EL i	ETE)
* CIL RE	TE	NT:	ION	RATI	ONALE:	(If	appl	ical	ble) IN	ADEQU IADEQU	ATE ATE	[]	
REMARKS: IOA INCO SHORT).	RR R	EC LR	TLY TY	IDEN PE RE	TIFIED SISTORS	THI	S RES	IST(FAI)	OR AS	S A FA	ILUR	E (1	FAI:	LED

ASSESSMI ASSESSMI NASA FMI	ENT	I	D:	ARCS-	1635	86-1				ASA DATA BASELINE NEW] K]	
SUBSYSTE MDAC ID:				ARCS 1635 RESIS	TOR,	5.1F	(1/4	1W					
LEAD ANA	LY	ST	:	D. HA	RTMA	N							
ASSESSME	ENT	:											
	CR:		ICAL LIGH	ITY T	R	EDUND	ANC	SCR	REENS		CII	-	
]	HD	W/FU	NC	A		F	3	С		111	<i>.</i> 171	
NASA IOA	[3	/3 /3]	[]	[]	[]	[]	*
COMPARE	[/]	£	J	[]	ĵ.]	[]	
RECOMMEN	DA'	ric	ONS:	(If	dif	feren	t fr	om N	ASA)				
	[3	/2R	1	[]	[]	[] (A	[DD/D		TE)
* CIL RE	TEN	T.	ON I	RATION	ALE:	(If	appl	icab	-				
DEWI DVG -										DEQUATE DEQUATE	[]	
REMARKS: THIS FAI POSITION TO FALSE	•	RI	EDUNI	DANCY I	PROV:	IDED.	LO	SS O	F ALL	REDUNDA	NCY	MAV	TJEAT

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-16	36					SA DATA: ASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1636 RESISTO	R, 5	5.1K :	L/4W					
LEAD ANALYST:	D. HART	MAN							
ASSESSMENT:									
CRITICAL		REI	DUNDA	NCY :	SCREE	NS		CIL	4
FLIGH HDW/FU		A		В		С			-
NASA [/ IOA [3 /3] []]	[]]	<u>[</u>]	[] *]
COMPARE [N /N]	[]	[]
RECOMMENDATIONS:	(If d	liff	erent	fro	m NAS	A)			
[\] !	[]	[]	[] (A)	[[D\DD] ELETE)
* CIL RETENTION	RATIONA	LE:	(If a	ppli	cable.	AL	DEQUATE DEQUATE	_]
REMARKS: IOA INCORRECTLY SHORT). RLR TYPE	IDENTIF	IED TORS	THIS CANN	RESI	STOR	AS A	A FAILUR	E (F	AILED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1637 05-6KA-2084-1	NASA BASE	DATA: CLINE [] NEW [X]
SUBSYSTEM:	ARCS 1637 RESISTOR, 1.2K		
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:			
CRITICALI FLIGHT	TY REDUNDA	ANCY SCREENS	CIL
	IC A	в с	ITEM
NASA [2 /1R IOA [3 /3] [P]] []	[F] [P] []	[X] * []
COMPARE [N /N] [N]	[и] [и]	[N]
RECOMMENDATIONS:	(If different	: from NASA)	
[3 /2R] [P]	[P] [P]	[D] (ADD/DELETE)
* CIL RETENTION R	ATIONALE: (If a		
REMARKS:		ADEQUA INADEQUA	ATE [j
NASA FMEA CONSIDE LOSS OF ACCURATE PROVIDED. LOSS OF VALVE CLOSED, POS	INDICATION OF T F ALL REDUNDANC	HE VALVE POSITION Y MAY LEAD TO FAI	REDUNDANCY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT	ID	:	ARC	9/88 5-1638 5KA-208	4-2					DATA: LINE NEW	[-	
SUBSYSTE MDAC ID:				ARC: 163: RES:		1.2	K 2W							
LEAD ANA	LYS	ST:		D. 1	HARTMAN	1								
ASSESSME	NT:	3												
	CR			ITY	RI	EDUN	DANCY	SCR	EENS			CII		
	I		JIGH V/FU	NC	A		В		C	2				
NASA IOA	[3	/3 /3]	[[]	[[]	[]		[[] *	t
COMPARE	[/]	[3	ſ]	[3		C]	
RECOMMEN	NDA'	ric	ONS:	• (If dif	fere	ent fr	om N	ASA)					
	[/]	[]	C]	ſ]	(A	[.DD/I	DELE:	ΓE)
* CIL RI		NT:	ION	RATI	ONALE:	(II	f appl	icab.	Ž.	_	JATE JATE	_]	
REMARKS	:													

NO DIFFERENCES.

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: LEAD ANA	ENT EA † EM:	ID: #:	ARC 05- ARC 163 RES	_	12	_	,	1		DATA ELINE NEW		x]	
ASSESSMI	ENT:	:											
	CRI	TICAI FLIGH		R	EDU	NDANCY	SCF	REENS			CI		
	H	IDW/Ft		A		В		C	3		IT	£M	
NASA IOA	[3 /3 3 /3]	[]	[]	[]		[]	*
COMPARE	[/]	[]	ί]	[]		[J	
RECOMMEN	IDAT	CIONS:	(1	f dif	fere	ent fr	om N	ASA)					
	[/]	[]	ĺ]	[)	(Al	[DD/I) DELE	TE)
* CIL RE REMARKS:			RATIO	NALE:	(II	f appl	icab	A	DEQU DEQU		[]	

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:		L640	1		N	IASA I BASEI		[(]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1640 RESIST	TOR, 12	K 1/4W							
LEAD ANALYST:	D. HAI	RTMAN								
ASSESSMENT:										
	ALITY GHT	REDU	NDANCY	SCR	EENS			CII		
	FUNC	A	В		C	:		111	in.	
NASA [3 / IOA [3 /	3] 3]	[]]]]]		[]	*
COMPARE [/]	[]	[]	[]		[]	
RECOMMENDATION	s: (If	differ	ent fr	om N	ASA)					
[/]	[]	[]	[]	(AI	[DD/I) DELE	ETE)
* CIL RETENTIO	N RATION?	ALE: (I	f appl	icab	A	DEQUA		<u></u>	j	
REMARKS: A SHORT ACROSS IOA RECOMMENDS FMEA.					OT A		BLE			

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSME ASSESSME NASA FME	NT	II):	ARCS-	-1641	02-1			•	ASA I BASEI	LINE	-		
SUBSYSTE MDAC ID:				1641	STOR,	5.1	K 1/4	W						
LEAD ANALYST: D. HARTMAN														
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
	H			NC NC	A		В	3	С			TTE	.M	
NASA IOA	[3	/3 /3]	[]	[]	[]		[]	*
COMPARE	[/]	[]	[1	ſ]		[]	
RECOMMEN	DA'I	CI (ons:	(II	f dif	fere	nt fr	om N	IASA)					
	[3	/2R]	[P]	[P)	[P]	(A	[DD/[ETE)
	(ADD/DELETE) CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []													
REMARKS: THIS FAI POSITION	LUF													VALVE Y LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		2-1			SA DATA: BASELINE NEW]
	ARCS 1642 RESISTOR,	5.1K	1/4W				
LEAD ANALYST:	D. HARTMAN	ſ					
ASSESSMENT:							
CRITICAL: FLIGHT	ITY RE	DUNDA	NCY SCRE	ENS		CIL	ĭ
HDW/FUI			В	С			_
NASA [3 /3 IOA [3 /3] []	[]	[]	[] *
COMPARE [/] [] ([]	[]	[] .
RECOMMENDATIONS:	(If diff	erent	from NAS	SA)			
[/] []	[]	[] (AI	[DD/DE] LETE
* CIL RETENTION 1	RATIONALE:	(If a	pplicable	AL	EQUATE	[]
REMARKS: A SHORT ACROSS A IOA RECOMMENDS RI FMEA.				гас		FAIL	URE.

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	• •			SA DATA: ASELINE [NEW []	
	ARCS 1643 RESISTOR	R, 1.2K 2W			
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
CRITICAL FLIGH		REDUNDANCY	SCREENS	CII	
	NC	A B	C	111	3F1
NASA [2 /1R IOA [3 /3] [] [2	(] *		
COMPARE [N /N] [и] [и	и] [и] []	4]
RECOMMENDATIONS:	(If di	ifferent fr	om NASA)		
[3 /2R] [P] [P	P [P] [] (ADD/I	O] DELETE)
* CIL RETENTION	RATIONALE	E: (If appl	AD	EQUATE [EQUATE []
REMARKS: NASA FMEA CONSID LOSS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, PO	FAILURE MAY	CAUSE JNDANCY			

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEI ASSESSMEI NASA FME	TN	II):	AR	CS-1644				1		DATA: LINE NEW]	
SUBSYSTEMDAC ID:	M:			ARG 16		1.2	K 2W							
LEAD ANA	LYS	T:	1	D.	HARTMAN	Ī								
ASSESSME	NT:	:												
	CR1				RE	DUN	DANCY	SCR	EENS			CIL		
	I		LIGH V/FU		A		В		1	С				
NASA IOA	[3	/3]	[]	[]	[[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	DA!	ri(ons:		(If diff	fere	nt fr	om N	NASA)					
	[3	/3]	[)	[]	[]	(A)	[DD/D		TE)
* CIL RE		NT	ION	RAT	'IONALE:	(If	appl	icak			UATE UATE]	
REMARKS: A SHORT RECOMMEN	AC	RO T	SS I HIS	HIS FAI	RESIST	OR I	S A C	REDI ATEI	IBLE D INT	FAIL O A	URE. FMEA.	IOA	L	

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1645 05-6KA-23	5 103-1	NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1645 RESISTOR,	, 1.2K 2W		
LEAD ANALYST:	D. HARTMA	AN		
ASSESSMENT:				
CRITICAL FLIGH	_	REDUNDANCY S	CREENS	CIL ITEM
	NC A	A B	С	TIEM
NASA [2 /1R IOA [3 /3] [E	[P] []	[X] *	
COMPARE [N /N] [N	и] [и]	[N]	[N]
RECOMMENDATIONS:	(If dif	fferent from	NASA)	
[3 /2R] [F	?][P]		[D] DD/DELETE)
* CIL RETENTION 1	RATIONALE:	: (If applica	ADEQUATE	[]
REMARKS:			~	[]
NASA FMEA CONSIDI LOSS OF ACCURATE PROVIDED. LOSS O VALVE CLOSED, POS	INDICATIO F ALL RED	ON OF THE VAI DUNDANCY MAY	LVE POSITION. R LEAD TO FALSELY	REDUNDANCY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	II		1/29/8 ARCS-1 NONE					1		DATA: LINE NEW	[]		
SUBSYSTEM MDAC ID: ITEM:	M:			ARCS 1646 RESIST	or,	1.2K	2W							
LEAD ANA	LYS	ST	:	D. HAI	(AMTS	ı								
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS FLIGHT												CIL	Л	
	I		W/FU		A		В		(С		11.0	•	
NASA IOA	[3	/ /3]	[]	[]	[]		[]	*
COMPARE	[N	/N	J	[]	[]	[]		[]	
RECOMMEN	DA!	ΓI	ONS:	(If	dif	ferent	t fro	om NAS	A)					
	[3	/3]	[]	[]	[]	(AI	[DD/D1] ELF	ETE)
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE INADEQUATE												[]	
REMARKS: A SHORT RECOMMEN												IOA		

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	I	D:	ARCS-	-1647				N	ASA DATA BASELINE NEW] K]	
SUBSYSTE MDAC ID:				ARCS 1647 RESIS	STOR,	5.1	K 1/4	I W				
LEAD ANA	LY	ST	:	D. HA	RTMA	N						
ASSESSME	NT	:										
	CR		ICAL LIGH	ITY	R	EDUN	DANCY	SCR	REENS		CII	
	1			NC	A		E	3	c	:	ITE	SM
NASA IOA	[3	/3 /3]	[]	[]	[[]	[] *]
COMPARE	[/]	[]	[]	[]	[]
RECOMMEN	DA'	ΓI	ons:	(If	dif	fere	nt fr	om N	ASA)			
	[3	/2R]	[P]	[F)	[P		[.DD/[] DELETE)
* CIL RE	TEI	T.	ION :	RATION	ALE:	(If	appl	icab				
										DEQUATE DEQUATE]
REMARKS: THIS FAI POSITION TO FALSE	•	RI	EDUN	DANCY	PROV:	IDED.	. LO	ss o	F ALL	REDUNDA	NCY	MAY LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMI ASSESSMI NASA FMI	ID:	ARC			1	NASA I BASE		[]			
SUBSYSTI MDAC ID: ITEM:			ARC 164 RES		, 5.1	K 1/4	ŀW					
LEAD ANA	ALYS	T:	D.	HARTMA	AN							
ASSESSMI	ENT:											
		TICA FLIG	LITY	I	DANC	SCR	EENS			CII		
			UNC	2	A	F	3	(2		111	11.1
NASA IOA	[[3 /3 3 /3]	[]	[]]]		[] *]
COMPARE	[/)	[]	[3	[]		[]
RECOMME	TADI	IONS	3: (If di	ffere	nt fi	com N	ASA)				
	[/]	[]	[]	[1	(A	[DD/I] DELETE)
* CIL RI	ETEN	TION	RATI	ONALE	: (If	appl	licab	· i	ADEQUI ADEQUI]
REMARKS A SHORT IOA RECO FMEA.	ACR							OT A	CRED	IBLE	FAI	

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSME ASSESSME NASA FME					49 210	03-1	L					ASA DATA BASELINI NEV	∑ []				
SUBSYSTE MDAC ID:				AR 16 RE	49	r oi	R,	1.2	2K 2V	1									
LEAD ANA	LY	ST	:	D.	HAI	RTI	IAN	4											
ASSESSME	ASSESSMENT:																		
CRITICALITY FLIGHT								EDUN	IDANG	CY	sc	CREEN	S			IL			
	FLIGHT HDW/FUNC									В			С		1	TE	M		
NASA IOA			/1R /3] [P] [F] [P]								[X]	*				
COMPARE	[N	/N]		[N]	[N]	C	N	1	[N]		
RECOMMEN	DA'	ri(ons:		(If	đ:	ifi	fere	ent 1	fro	om	NASA)						
	[3	/2R]		[P]	[P]	[P	•		D DI		ETE)	
* CIL RE	TEI	1 T	ION I	RAT	ION	ALI	Ξ:	(If	app	1 1	Lca	ıble)			_				
												II		DEQUATE DEQUATE] []		
REMARKS: NASA FME	A (וחי	וחדפע	ers	MIII	ריף,	ſĐĪ	म म	נדדבי	IDE	25	TH.	Γ¢	FAILURE	· M	TA W	CI	lice	
LOSS OF	ACC	נטכ	RATE	IN	DIC	AT.	101	1 OF	THE	7 3	/AI	VE P)SI	TION.	RE	DUI	ND?	NCY	
PROVIDED VALVE CL														FALSEI		FA:	[L]	NG '	THE
AWTAE CT	NOI	, لان	, PU	2OT	זעם	C.	177	LIT	n dri.	TT	27	ON O	. L.	CATTONS.					

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT	ID):	1/29/8 ARCS-1 NONE					1	NASA DATA BASELINE NEW	[]							
SUBSYSTE MDAC ID: ITEM:				ARCS 1650 RESIST	or,	1.2K	2W												
LEAD ANA	LYS	ST:	:	D. HAF	(AMTS	Ī													
ASSESSME	NT:	;																	
CRITICALITY REDUNDANCY SCREENS FLIGHT											CI:								
	ŀ		V/FU		A		В			С									
NASA IOA	[3	/3]	[]	[]	[]	[]	*						
COMPARE	[N	/N]	[]	[]	ĺ]	[]							
RECOMMEN	IDA!	ri¢	ons:	(If	dif	feren	t fr	om NAS	SA)										
	[3	/3]	[]	(]	[] (2	[ADD/	DET]	ETE)						
* CIL RE		N'T'	ION	RATION	ALE:	(If	appl	icable		ADEQUATE ADEQUATE	[]							
	AC	RO:	SS T HIS	HIS RE	SIST(E BE	OR IS	INADEQUATE []												

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1651 05-6KA-21	02-1				ASA DATA BASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1651 RESISTOR,	5.1K	1/40	1				
LEAD ANALYST:	D. HARTMA	N						
ASSESSMENT:								
CRITICAL: FLIGHT		EDUNDA	NCY	SCRE	ENS		CIL	
HDW/FUI			В		С		ITE	M
NASA [3 /3 IOA [3 /3] []	[]	[]	[] *]
COMPARE [/	ן נ]	[]	[]	[]
RECOMMENDATIONS:	(If dif	ferent	fro	m NA:	SA)			
[3 /2R] [P]	[P]	[P	-	[DD/D:] ELETE)
* CIL RETENTION F	RATIONALE:	(If a	ppli	cable	AI	DEQUATE DEQUATE	[]
REMARKS: THIS FAILURE MAY POSITION. REDUND TO FALSELY FAILIN	DANCY PROVI	IDED.	LOS	S OF	INDIO ALL	CATION OF	F THI	MAY LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMENT ASSESSMENT NASA FMEA	r D2 r II #:	ATE:	1/29/8 ARCS-1 05-6K	88 1652 A-210				ASA DA BASELI	NE]		
SUBSYSTEM: MDAC ID: ITEM:	:		ARCS 1652 RESIST				v						
LEAD ANALY	(ST:	:	D. HAI	RTMAI	1								
ASSESSMENT	r:												
CF		CALI LIGHT	TY	RI	EDUNDA	ANCY	SCREE	ens			CIL ITEN	1	
	HDW	/FUN	iC	A		В		С					
NASA [] AOI	3	/3 /3]	[]	[]	[]		[] *]	
COMPARE [•	/]	[]	[]	[]		[]	
RECOMMENDA	TIO	NS:	(If	diff	erent	fro	m NAS	A)					
(/]	[]	[]	[]		[D/DE] LETE	3)
* CIL RETE	NTI	ON R	ATIONA	LE:	(If a	ppli	.cable		DEQUAT	יסו	_	1	
REMARKS:									DEQUAT		[]	
A SHORT AC IOA RECOMM FMEA.	ROS	S A S RE	RLR TY MOVAL	PE R OF T	ESIST HE "S	OR I	S NOT	A C	CREDIB MODE	LE FR	FAII OM I	URE. HIS	,

ASSESSME ASSESSME NASA FME	NT I		ARCS				N	IASA DAT BASELIN NE]		
SUBSYSTEMDAC ID:	M:		ARCS 1653 RESI	STOR,	12K	1/4W							
LEAD ANA	LYST	:	D. H	ARTMA	N								
ASSESSME	NT:												
	CRIT	ICAL LIGH		R	EDUN	DANCY	SCRI	EENS			IL TEM	ſ	
	_	W/FU		A		В		(_	
NASA IOA	[3 [3	/3 /3]	[]	[]	[]	[[]	*
COMPARE	[/]	[]	[]	[1	[]	
RECOMMEN	DATI	ons:	(I	f dif	fere	ent fr	om Na	ASA)					
	[/	1	[1	[]	[]] ADE))/DI] ELE	TE
* CIL RE	TENT	NOI	RATIO	NALE:	(If	appl	icab	ž	ADEQUAT ADEQUAT	_]	
REMARKS:										•		-	

NO DIFFERENCES.

ASSESSMEI ASSESSMEI NASA FME	T	ID	:	ARC	S-1654				N		DATA: LINE NEW	[]	
SUBSYSTEM MDAC ID: ITEM:	M:			ARC: 165 RES		1.2	K 2W							
LEAD ANA	LYS	ST:		D. 3	HARTMA	N								
ASSESSME	NT:	:												
	CR1		CAL IGH	ITY	F	DANCY	SCI	REENS			CIL			
	F			NC	A		В	;	(2				
NASA IOA	[3	/3 /3]	[]	[]	[]		[] *	
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	'DA'	rio	ns:	(If di	ffere	ent fr	om 1	NASA)					
	[/]	[]	[]	(]	(A)	[DD/I] ELETI	E)
* CIL RE	TE	NTI	ON	RATI	ONALE	: (Ii	f appl	ica		ADEQU ADEQU	JATE JATE	[]	
REMARKS: A SHORT IOA RECO	AC	ROS END	S A	RLF	TYPE	RESI THE	ISTOR "SHOI	IS :	NOT A	CREI	DIBLE DDE F	FA] ROM	LURE THIS	•

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

FMEA.

ASSESSM ASSESSM NASA FM	ENT	I	D:	ARC	9/88 S-1655 6KA-21		1		•	NASA I BASEI		[x]	
SUBSYST MDAC ID ITEM:				ARC 165 RES	_	5.3	lK 1/	4 W						
LEAD AN	ALY	ST	:	D. 1	HARTMA	N.								
ASSESSM	ENT	:												
	CR		ICAI LIGH	ITY T	R	EDUI	NDANC'	SCF	REENS			CI	_	
	I			NC	A		1	3	(2			LM	
NASA IOA	[[3 3	/3 /3]	[]	[[]	[]		[] *	
COMPARE	[/]	[]	[]	(]		[]	
RECOMMEN	IAG	rio	ons:	()	f dif	fere	ent fr	om N	ASA)					
	[3	/2R]	[P]	[F)	[]	P]	(AI	[DD/1] DELETE	:)
* CIL RE		T	ON	RATIO	NALE:	(If	appl	icab	7	DEQUA		[]	
REMARKS: LOSS OF CLOSED.		F	REDU	NDANG	CY MAY	LEA	D TO	FALS	ELY F	'AILIN	G TH	iE 7	VALVE	

ASSESSME ASSESSME NASA FME	ит т	D:	ARCS-	-1656	.02-1			ŀ	IASA I BASEI		[
SUBSYSTE MDAC ID: ITEM:			ARCS 1656 RESIS	STOR,	5.1	K 1/4	W						
LEAD ANA	LYSI	? :	D. HA	RTMA	N.								
ASSESSME	NT:												
			ITY	F	REDUN	DANCY	SCR	EENS			CIL		
		FLIGH DW/FU	NC	P	A	F	3	(2				
NASA IOA	[3	3 /3]	[]	[]	[[]		[]	*
COMPARE	[/	1	[]	[]	(]		[]	
RECOMMEN	DAT	ons:	(II	f di	ffere	nt fi	com N	IASA)					
	C	/]	[]	[]	[1	(Al	[DD/I		TE)
* CIL RE		rion	RATIO	NALE:	: (If	app	licab	7	ADEQUA ADEQUA		[]	
REMARKS: A SHORT IOA RECO	ACRO	OSS A	REMOVA	TYPE L OF	RESI THE	STOR	IS N	OT A	CRED	IBLE DE F	FAI ROM	LUR THI	E.

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

FMEA.

ASSESSME NASA FME	NT I	D:						ASA DA BASELI N] K]]		
SUBSYSTEMDAC ID:	M:		ARCS 1657 RESIS	TOR.	12K	1/4W							
LEAD ANA	LYST	:	D. HA	R TMA I	N								
ASSESSME	NT:												
(ICAL LIGH		R	EDUNI	DANCY	SCRE	ENS			CIL ITE		
	FLIGHT HDW/FUNC A					В		С		•		••	
NASA IOA	[3	/3 /3]	[]	[]	[[]		[[]	*
COMPARE	[/]	[]	C]	[]		[]	
RECOMMEN	DATI	ons:	(If	dif	ferer	nt fro	om NAS	SA)					
	[/]	[]	[]	[(ADI	[D/D		TE)
* CIL RE	rent:	ION 1	RATION	ALE:	(If	appl:	icable	A	DEQUATI DEQUATI		[]	
REMARKS:								TMM	OPĞOWI)	ا ت	L	J	

NO DIFFERENCES.

ASSESSMEN ASSESSMEN NASA FME	ID		ARCS	9/88 5-1658 5KA-210				ASA DA BASELI N	NE]			
SUBSYSTEM MDAC ID:				ARCS 1658 RES		12K	1/4W							
LEAD ANA	LYS	T:		D. 1	HARTMA	N								
ASSESSME	NT:													
•	CRITICALITY REDUNDA FLIGHT											CIL		
				NC	A		В		С					
NASA IOA	[3	/3 /3]	[]]]	[]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DAT	ric	NS:	(If dif	fere	ent fr	om 1	NASA)					
	[/]	ĵ.)	(]	C	1	(A	[DD/I		ETE)
* CIL RE	TEN	T	ON	RATI	ONALE:	(I 1	f appl	ical	P	DEQUA'		[]	
REMARKS: A SHORT IOA RECO FMEA.	ACI	ROS ENI	SS A	A RLR REMOV	TYPE AL OF	RES: THE	ISTOR "SHOR	IS I	NOT A FAILUF	CREDI	BLE E F	FAI ROM	LUI TH	RE. [S

ASSESSMI ASSESSMI NASA FMI	ENT	ID:	ARC	5-165				ŀ	NASA DAS BASELII NI		x]	
SUBSYSTE MDAC ID:			ARCS 1659 RESI	•	, 5.1	LK 1/4	IW					
LEAD ANA	LYS	ST:	D. I	IARTM	AN							
ASSESSME	ENT:	:										
	CI:											
	H	IDW/F	UNC	7	A	E	3	C	:		DM.	
NASA IOA	[3 /3 3 /3]	[]	[]	[]	[] *]	
COMPARE	[/]	[]	[J	[]	C]	
RECOMMEN	DAT	ONS	: (1	f dif	fere	nt fr	om N	IASA)				
	[3 /2	R]	[]	']	[P]	[P	-	[ADD/I] DELETE)	
	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE []											
THIS FAI POSITION	INADEQUATE [] REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION											

OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	NT I	D:	1/29/8 ARCS-1 05-6K	1660)2-1	NASA DATA: BASELINE [] NEW [X]								
SUBSYSTE MDAC ID: ITEM:			ARCS 1660 RESIS	ror,	5.1K	1/40	₹							
LEAD ANA	LYST	?:	D. HA	RTMAI	1									
ASSESSME	ENT:													
		ICAL		R	EDUND	ANCY	SCRE	ENS		CIL				
	_	LIGH W/FU		A		В			С					
NASA IOA	[3	3 /3]	[]	[]	[]	[] *			
COMPARE	[/]	£ (3	[]	[]	[]			
RECOMME	NDAT]	cons:	(If	dif	ferer	nt fr	om NA	ASA)						
	[/]	[]	[) .	[] ([ADD/I] ELETE)			
* CIL R		rion	RATION	ALE:	(If	appl	icabl		ADEQUATE ADEQUATE	_]			
REMARKS	:			****	DECT	COM?	TC NO	מיחר	CREDIBL	E FAI	TURE.			

A SHORT ACROSS A RLR TYPE RESISTOR IS NOT A CREDIBLE FAILURE. IOA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FROM THIS FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1661 05-6KA-2103-1	NASA DATA BASELINI NEV	- •								
	ARCS 1661 RESISTOR, 5.1K 1,										
LEAD ANALYST:	D. HARTMAN										
ASSESSMENT:											
CRITICAL: FLIGH	CIL										
	NC A	В С	ITEM								
NASA [2 /1R IOA [3 /3] [P] [] [F] [P]	[X] *								
COMPARE [N /N] [N][иј [иј	[N]								
RECOMMENDATIONS:	(If different f	from NASA)									
[3 /2R] [P] [P] [P] (A	[D] DD/DELETE)								
* CIL RETENTION F	RATIONALE: (If app										
REMARKS:		ADEQUATE INADEQUATE									
LOSS OF ACCURATE PROVIDED. LOSS OF	EMARKS: (ASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE OSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.										

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	T	II			-1662					NASA I BASEI		[]	
SUBSYSTEM MDAC ID:	M:			ARCS 1662 RESI		1.2	K 2W							
LEAD ANA	LYS	T	:	D. F	IART MAN	Ì								
ASSESSME	NT:	}												
•	CRI			ITY	RE	DUN	DANCY	SCR	EENS			CIL		
	F		LIGH W/FU	NC	A		В			С				
NASA IOA	[3	/3]	[]	[]	ĵ []		[]	*
COMPARE	(N	/N	1	[]	[]	ſ]		[3	
RECOMMEN	DA:	rI	ons:	(:	f diff	fere	nt fr	om N	IASA)					
	[3	/3]	[]	[]	[1	(A	[DD/D		TE)
* CIL RE		NT	ION	RATI(ONALE:	(If	appl	icak		ADEQU.		[]	
REMARKS: A SHORT RECOMMEN	AC	RO T	SS I HIS	HIS I	RESISTO	OR I	S A C	REDI	BLE N'	FAILU O A F	RE. MEA.	IOA	L	

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT D ASSESSMENT I NASA FMEA #:	ATE:	1/29/ ARCS- 05-6K	88 16 A-	63 21	03-1					N.	ASA DA BASEL	ATA INE NEW	: [x]		
SUBSYSTEM: MDAC ID: ITEM:		ARCS															
LEAD ANALYST	:	D. HA	RT	MA	N												
ASSESSMENT:																	
F	LIGH'						CY	SCR	EENS	5				IL Per			
HD	W/FU	NC		A			В			С					-		
NASA [2 IOA [3	/1R /3]	[P]	[F]]	P]]	X]	*	
COMPARE [N	/N]	[N]	[N]	[N]		[N]		
RECOMMENDATIO	ons:	(If	d:	Ĺfí	ferent	t :	fro	om NA	ASA)								
[3	/2R]	[P]	[P]	[P]	(AI				TE)	
* CIL RETENT	ION F	RATION	ALI	: 2	(If a	p	pli	.cab]	•		EQUAT]		
REMARKS:											EQUAT		•		-		
NASA FMEA COI LOSS OF ACCUI PROVIDED. LO VALVE CLOSED	RATE DSS (INDICA F ALL	AT] RE	ON EDU	I OF I	HI Y	E V MA	ALVE Y LE	PO PAD	SI	TION.	R ELV	FIL	TIN	DΔ	NCV	,
AT MEETING WI	TH S	UBSYST	EM	I M	IANAGE	R	ON	1/2	0/8	8,	NSTS	22	20	6	WA	s	

THEREFORE, THIS ISSUE REMAINS OPEN.

DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

ASSESSM ASSESSM NASA FM	ENT	I	D:		CS-1664]		DATA: LINE NEW	[]	
SUBSYST MDAC ID ITEM:				ARG 160 RES		1.2	2K 2W							
LEAD AN	ALY	ST	:	D.	HARTMAI	V								
ASSESSM	ENT	:												
	CR		ICAI LIGH	LITY	RI	EDUI	NDANCY	SCF	REENS			CIL		
	I		W/FU		A		В		(C		TTE	.P1	
NASA IOA	. [3	/3]	[]	[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMME	NDA!	ri	ons:		(If dif	fere	ent fr	om N	IASA)					
	[3	/3]	[]	[]	[]	(AI	[DD/D	-	TE)
		NT:	ION	RAT:	IONALE:	(Ii	f appl	icab			ATE ATE	[]	
REMARKS A SHORT RECOMME	ACI											IOA	•	

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMEN' ASSESSMEN' NASA FMEA	T ID:	ARCS-1	1665	02-1				ASA DATA BASELINE NEW	-	-	
SUBSYSTEM MDAC ID: ITEM:	· -	ARCS 1665 RESIST	COR,	5.1K	1/4	W					
LEAD ANAL	YST:	D. HA	RTMAI	N							
ASSESSMEN	T:								-		
c	RITICAL FLIGH		R	EDUND!	ANCY	SCRE	ENS		CIL		
	HDW/FU		A		В		С			••	
NASA IOA	[3 /3]	[]	[]	[]	[] ;	t
COMPARE	[/]	[]	[]	[]	[]	
RECOMMEND	ATIONS:	(If	dif	ferent	t fr	om NA	SA)				
	[3 /2R]	[P]	[P	1	[P] (A	[DD/D	ELE:	ΓE)
* CIL RET	ENTION	RATION	ALE:	(If a	appl	icabl	A	DEQUATE DEQUATE	[]	
REMARKS: THIS FAIL POSITION. TO FALSEL	REDUN	DANCY 1	PROV	IDED.	LO	SS OF	INDI ALL	CATION C	F TH NCY	MAY	LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT :	ID:		ARC	9/88 S-1666 6KA-210					ASA I BASEI	ATA: LINE NEW			
SUBSYSTE MDAC ID:				ARC 166 RES		5.1	K 1/41	N						
LEAD ANA	LYS	T:		D.	HARTMA	N								
ASSESSME	ENT:													
				ITY	R	EDUN	DANCY	SC	REENS			CIL		
			IGH' /FU	NC	A		В		C					
NASA IOA	[3 ,	/3 /3]	[]	[]	[[]		[]	*
COMPARE	ι		/)	[3	ĺ]	[]		[]	
RECOMME	radn	'IO	ns:	((If dif	fere	ent fr	om	NASA)					
	[/]	[]	ί]	Į.]	(Al	[DD/I)EL	ETE)
* CIL R	ETEI	VTI	ON	RAT:	IONALE:	: (I:	f appl	ica			ATE ATE]	
REMARKS A SHORT IOA REC FMEA.	3.01	ROS ENE	S A	REMO	R TYPE VAL OF	RES:	ISTOR "SHOF	IS RT"	NOT A	CRED	IBLE DE F	FA: ROM	LU! TH	RE. IS

ASSESSME ASSESSME NASA FME SUBSYSTE MDAC ID: ITEM:	ent Ea Em:	' I #:	D:	AR 05 AR 16 RE	CS- -6K. CS 67 SIS'	16 A-	67 21 R,	1.	-1 .2K 2					ASA DAT BASELIN NE		•]	
LEAD ANA			•	υ.	HAI	KT)	MA	N										
ASSESSME	CR:	IT: F:	ICAL: LIGH: W/FUI	r			RI A		JNDAN	CY B		CREEN	s c			IL TE		
NASA IOA	[2	/1R /3]		[P]	[F]	[P]	[[х]	*
COMPARE	Į	N	/N]		[N]	[N]	C	N]		N		
RECOMMEN	DA'	ric	ONS:	(Ίf	đi	lff	er	ent i	fro	om	NASA)					
	[3	/2R]		[P	3	[P]	[P			D /DI		ETE)
* CIL RE	TEN	T]	ON R	ITA	ONA	LE	::	(I	f app	oli	ica	able)						
REMARKS: NASA FME LOSS OF A PROVIDED VALVE CLA	ACC •	LC	CATE OSS O	F A	LL LL	TI RE	ON	O.	F THE ANCY	V Am	'AI Y	THI VE PO	IAI	TION.	į M	TTA	D 3	11017

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

	1/29/8 ARCS-1 NONE	8 668					SA DATA BASELINI NEV	E	-]	
MDAC ID:	ARCS 1668 RESIST	OR,	1.2K	2W							
LEAD ANALYST:	D. HAR	TMAN									
ASSESSMENT:			•								
CRITICAI FLIG		RE	DUNDA	NCY	SCREE	NS		-	CIL ITEN	1	
HDW/F	_	A		В		С					
NASA [/ IOA [3 /3]	[]	[]	[]		[]	*
COMPARE [N /N	1	[1	[)	[1		[]	
RECOMMENDATIONS	: (If	diff	erent	fro	m NAS	SA)					
[3 /3	3	[3	[]	[] (ΆI	[DD/D	ELI	ETE)
* CIL RETENTION	RATION	ALE:	(If a	ppli	icable	A	DEQUATE DEQUATE		[]	
REMARKS: A SHORT ACROSS RECOMMENDS THIS	THIS RE	SISTO E BE	OR IS	A CI	REDIBI	LE F INTO	AILURE	A.	IOA		

ISSUE NOT RESOLVED AT THE MEETING WITH THE SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM ASSESSM NASA FM	ENT ENT EA	' [']	ATE:	1, AI 05	/29/ RCS- 5-6K	88 16 A-	69 21	02-1							ASA I BASEI		[] X]		
SUBSYST	EM:			AF 16	RCS 569			5.1												
LEAD AND	ALY	ST	:	D.	HA	RT	MAI	N												
ASSESSMI	ENT	:																		
	CR	IT F	ICAL LIGH	ITY T	7		RI	EDUN	DAN	ICY	S	CRE	EŅ	s			CII ITI			
	•	HD	W/FU	NC			A			В				С			111	7M		
NASA IOA	[3 3	/3 /3]]]	[]]]]		[]	*	
COMPARE	[/]		[]	[]		[]		[)		
RECOMMEN	IDA:	ri	ons:		(If	đi	iff	fere	nt	fro	om	NAS	SA))						
	(3	/2R]		[P]	[P]		[P]	(AI	[DD/E		ETF	E)
* CIL RE	TE	1T.	ION I	RAT	IONA	LE	E :	(If	ap	pli	ica	able	≥)							
REMARKS:														IAD	EQUA:	ΓE	į]		
THIS FAI POSITION TO FALSE	LY	F/	TUONE	JAN	CYP	RO	VI	DED.		മാ	23	OF	ΔT	.T.	DEDID	TOAN	O37	162 11		

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NТ	II):	ARCS	5-1670		-				NASA BASE	DATA LINE NEW	[] K]	
SUBSYSTE MDAC ID: ITEM:				ARCS 1670 RESI		5.1	.K 1	/4W	ī						
LEAD ANA	LYS	ST	:	D. I	IARTMA	N									
ASSESSME	NT	:													
	CR				R	EDUN	IDAN	CY	SCI	REENS			CII		
	1		LIGH W/FU	NC	A			В			С		111	7141	
NASA IOA	[3	/3 /3]	[]	[]	[]		[] *	
COMPARE	[/	1	[]	[]	ſ	3		[]	
RECOMMEN	IDA:	ΓΙC	ons:	(1	f dif	fere	ent	fro	m l	NASA)					
	[/]	[]	[]	[]	(A)	_] DELET	Έ)
* CIL RE		NT:	ION	RATIO	ONALE:	(If	ap	pli	cal	·	ADEQU ADEQU	ATE ATE	[]	
REMARKS: A SHORT IOA RECO	AC														

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

FMEA.

SUBSYSTEM: ARCS MDAC ID: 1671		
ITEM: RESISTOR, 12K 1/4W		
LEAD ANALYST: D. HARTMAN		
ASSESSMENT:		
	CIL	
FLIGHT HDW/FUNC A B C	ITEM	
NASA [3 /3] [] [] [] IOA [3 /3] [] []	[]	*
COMPARE [/] [] []	[]	
RECOMMENDATIONS: (If different from NASA)		
[/] [] [] (AD	[]	ETE)
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE INADEQUATE REMARKS:	[]	

NO DIFFERENCES.

ASSESSME ASSESSME NASA FME	NT NT A #	DA II	TE:	1/29 ARCS 05-6	/88 -1672 KA-21	08-1				ASA [BASE]]
SUBSYSTE MDAC ID: ITEM:	M:			1672			1/4W						
LEAD ANA	LYS	ST:	;	D. H	ARTMA	N							
ASSESSME													
	CR		[CA]	LITY	F	EDUN	DANCY	SCR	EENS			CIL	
	I		W/FU		A	L	В	}	C	3			
NASA IOA	[3	/3 /3]	[]	[]	[]		[] *]
COMPARE	[/	3	ſ]	£)	[]		[]
RECOMME	NDA	TI	ons	: (3	[f di	ffere	ent fr	om N	iasa)				
				.]]	(A	[DD/E] DELETE)
* CIL R	ETE	TN	'ION	RATI	ONALE	: (I:	f app]	Lical		ADEQU ADEQU	IATE IATE	[]
REMARKS A SHORT IOA REC FMEA.		RC	SS IDS	A RLR REMOV	TYPE AL OF	RES:	ISTOR "SHO	IS I	NOT A FAILU	CREI	DIBLE DDE F	FA]	LURE. THIS
ISSUE F	ESC FAI	LI LI	ÆD JRE	ON 1/ MODE	20/88 TO BE	AT REM	MEETI OVED)	NG W	ITH S	UBSYS	STEM	MAN	AGER

ASSESSME ASSESSME NASA FME	ENT ENT :A	' [' I #:	ATE: D:	1/29/ ARCS- 05-6F	'88 -1673 (A-21	3 L02-:	1		N	IASA DA BASEL		x]	
SUBSYSTE MDAC ID:	: M:			ARCS 1673 RESIS									
LEAD ANA	LY	ST	:	D. HA	RTMA	N							
ASSESSME	NT	:											
. (F	LIGH	_	R	EDUN	DANC	? sc	REENS		CI	L EM	
	1	HD	W/FU	NC	A	•	I	3	С		11	LH	
NASA IOA	[3	/3 /3]	[]	[]]]	[]	*
COMPARE	[/]	[)	[]	[]	[]	
RECOMMENI	DA'I	ric	ons:	(If	dif	fere	nt fr	om i	NASA)				
÷]					[P]	[(ADD/] DELE	E TE)
* CIL RET	CEN	T	ON F	RATION	ALE:	(If	appl	ical					
REMARKS:									INAL	EQUAT:	E į]	
THIS FAII POSITION. TO FALSEI OPERATION	·Υ	FA	LUUNL	MILIF	'KUV I	F F 3M: F 3	. In	cc /	אר ער	DEDITION	~~~~~		

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	ARCS-1674					ASA DATA BASELINE NEW]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1674 RESISTOR,	5.1K	1/4W	,					
LEAD ANALYST:	D. HARTMA	N							
ASSESSMENT:									
CRITICA		EDUNDA	NCY	SCREE	NS		CIL		
FLIG HDW/F	INC A	<u>.</u>	В		С		TIE	M1	
NASA [3 /3 IOA [3 /3] [] []	[]	[]	[] *]	
COMPARE [/] []	[]	[]	[]	
RECOMMENDATIONS	: (If dif	ferent	fro	m NAS	A)				
[/] []	[]	[[DD/D:] ELETE	;)
* CIL RETENTION	RATIONALE:	(If a	ppli	cable	•	DEQUATE	[]	
REMARKS:					INAI	DEQUATE		j	
A SHORT ACROSS IOA RECOMMENDS IFMEA.									

ASSESSME ASSESSME NASA FME	TI	II):	AR	1/29/88 NASA DATA: ARCS-1675 BASELINE [05-6KA-2087-1 NEW [[]			
SUBSYSTE MDAC ID:				16	CS 75 SISI	roi	₹,	5.11	К 1,	/4V	7								
LEAD ANA	LYS	T	:	D.	HAI	RTI	IAN	•											
ASSESSME	NT:																		
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C																			
	H			_			A			В			C	:					
NASA IOA	[3	/3 /3]]]	[]		[]			[]	*
COMPARE	[/]		[]	(]		[]			[]	
RECOMMEN	IA DI	'IC	ons:		(If	d:	iff	ere	nt	fro	om l	NAS	A)						
	[3	/2R]		[P]	[P]		[I	•]		(Al	[DD/[ETE)
* CIL RE		T.	ION	RAT	'ION	ALI	€:	(If	ap	pl:	ical		P	DE(TAUÇ TAUÇ	E E	[]	
REMARKS: THIS FAI POSITION	LUF	RI	EDUN	DAN	ICY I	PR(IVC	DED	•	LOS	SS (OF	ALI	RI	EDUN	DAI	NCY	MA	Y LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT	ID:	ARC	RCS-1676 BASELINE [] 5-6KA-2087-1 NEW [X]											
SUBSYSTE MDAC ID: ITEM:			ARCS 1676 RES		5.1	.K 1/4	IW								
LEAD ANA	LYS	T:	D. I	IARTMA	N										
ASSESSME	NT:														
			LITY	F	REDUN	IDANCY	SCR	EENS			CII				
		FLIG DW/F		7	1	E	3	(2		115	,141			
NASA IOA	[3 /3 3 /3]]	[]	[]]]		[]	*		
COMPARE	[/]	[]	[]	[]		[]			
RECOMMEN	TACI	ons	: (:	If di	ffere	ent fr	com N								
	[/]	.[]	[]	[]	(Al	[DD/I		ETE)		
* CIL RE	TEN	TION	RATIO	ONALE:	: (If	appl	licab	1	ADEQUA ADEQUA		[]			
REMARKS: A SHORT IOA RECO	ACR								CRED						

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1677	87-1			ASA DATA BASELINE NEW	-]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1677 RESISTOR,	5.1K 1	./4W				
LEAD ANALYST:	D. HARTMA	N					
ASSESSMENT:							
CRITICAI FLIGH		EDUNDAN	CY SCREE	ens		CIL	
HDW/FU			В	С		IIE	M
NASA [3 /3 IOA [3 /3] [] []	[]	[] *
COMPARE [/] [) []	[]	[]
RECOMMENDATIONS:	(If dif	ferent	from NAS	SA)			
[3 /2F	t] [P] [P]	[P		[DD/D] ELETE)
* CIL RETENTION	RATIONALE:	(If ap	plicable	AL	EQUATE]
REMARKS: THIS FAILURE MAY POSITION. REDUN TO FALSELY FAILI	DANCY PROV	IDED.	LOSS OF	NDIC ALL	CATION O	F TH	E VALVE MAY LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT II		1/29/ ARCS- 05-68	1678				N	IASA D BASEI		[-	
SUBSYSTE MDAC ID: ITEM:			ARCS 1678 RESIS	TOR,	5.1	K 1/4	W				٠		
LEAD ANA	LYST	:	D. HA	RTMA	N								
ASSESSME	NT:												
	CRIT			F	EDUN	DANCY	SCR	EENS			CIL		
	_	LIGH W/FU		P	\	E	3	(
NASA IOA	[3	/3 /3]	[]	[]	[[]		[]	*
COMPARE	[/]	[]	C]	C	1		[]	
RECOMMEN	IDATI	ons:	(I :	f di	ffere	nt fi	com N	IASA)					
	[/]	(]	C	3	[]	(A	[DD/I		ETE)
* CIL RI	ETENT	NOI	RATIO	NALE	: (If	app:	licab		ADEQU. ADEQU.		[]	
REMARKS: A SHORT IOA RECO	ACRO	SS A	A RLR '	TYPE L OF	RESI THE	STOR	IS N RT" I	OT A	CRED RE MO	IBLE DE F	FA]	LUI TH:	RE. [S

ASSESSMI ASSESSMI NASA FMI	ent ent ea (ATA: INE [NEW [
SUBSYSTE MDAC ID:				ARCS 1679 RESIS	TOR	, 5.1	.K 1/4	W				
LEAD ANA	LYS	T	:	D. HA	RTM	AN						
ASSESSME	ENT:	:										
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C												
	H			_	į	A	В		С	IT	'EM	
NASA IOA	[3	/3 /3]	[]	[]	[]	[] *]	
COMPARE	[/]	[]	[]	[]	ſ	1	
RECOMMEN	DAT	'IC	ONS:	(If	di	ffere	nt fro	om 1	NASA)			
	[3	/2R]	[]	P]	[P]	[P]] DELETE)	
* CIL RE	TEN	TJ	ON I	RATION	ALE:	(If	appli	cal				
DE141 Dec-									PAUQEDA PAUQEDANI]	
POSITION	LY	RE	EDUNI	DANCY :	PROV	IDED	. Los	s c	E INDICATION OF ALL REDUN OSSIBLY EFFE	OF T	MAV LEAD	

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSME ASSESSME NASA FME	NT NT A #	DA ID	TE:	1/29 ARCS 05-6	/88 -1680 KA-20	88-1					DATA: LINE NEW			
SUBSYSTE MDAC ID: ITEM:	м.			1680			K 1/4W	ī						
LEAD ANA	LYS	T:		D. H	ARTMA	N								
ASSESSME	NT	:												
	CR:		[CA]		R	EDUN	DANCY	SCI				CIL		
	1			UNC	A		В		C	:				
NASA IOA	[3	/3 /3]	[]	[]	[]		[*
COMPARE	[/]	ſ	3	(]	[]		[]	
RECOMME	NDA	TI	ons	: (1	f di	ffere	ent fr	om 1	NASA)					
							[]	(A	[DD/I) DELE	
* CIL R	ETE	NT	ION	RATIO	ONALE	: (I:	f appl	ica	4		UATE UATE]	
REMARKS A SHORT IOA REC FMEA.		RO IEN	SS	A RLR REMOV	TYPE AL OF	RES THE	ISTOR "SHOR	IS T"	NOT A	CRE RE M	DIBLE ODE F	FA: ROM	LUI TH:	RE. IS
ISSUE R	ESC FA]	LU	ED JRE	ON 1/ MODE	20/88 TO BE	AT REM	MEETIN OVED)	ig W	VITH S	UBSY	STEM	MAN.	AGE:	R

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1681 NASA FMEA #: 05-6KA-2088-1 SUBSYSTEM: ARCS MDAC ID: 1681													
				168	-0								
LEAD AN	ALY	ST	':	D.	HARTM	AN							
ASSESSMI	ENT	:											
	CR		ICAL LIGH		I	REDUI	NDANCY	S	CREENS		CI		
	1	HD	W/FU	NC	Z	1	E	3	(11	EM	
NASA IOA]	3 3	/3 /3]	[]	[]	[]	[] *	
COMPARE	[/]	[]	[]	[]	(
RECOMMEN	IDA'	ric	ons:	(If dif	fere	ent fr	om	NASA)				
			/2R		_				[P		[A DD/] DELETE	Ξ)
* CIL RE	TEN	T]	ON I	RATIO	ONALE:	(If	appl	ica		_			
REMARKS:										DEQUATE DEQUATE]]	
THIS FAI POSITION TO FALSE OPERATION	LY	L/L	MONT		CPROV	LUED	In	20	AD STT	DESTINA			

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1682 NASA FMEA #: 05-6KA-2088-1 SUBSYSTEM: ARCS]	
SUBSYSTE MDAC ID:				168		, 5.1	К 1/4	W						
LEAD AND	ALYS	T:		D. 3	HARTM	AN								
ASSESSMI	ENT:	:												
	CRI		CAL			REDUN	DANCY	sc:	REENS			CIL		
	F		IGH /FU			A	E	3	С					
NASA IOA]	3	/3 /3]	[[]] []	[]		[] *	;
COMPARE	[/)	[3	[]	[]		[]	
RECOMME	NDA'	ric	ons:	. ((If di	ffere	ent fi	rom	NASA)					
	[/]	[]	[]	[]	(A)	[DD/D	ELET	re)
* CIL R	ETE:	NT:	ION	RAT]	ONALI	E: (I	f app	lica	P	ADEQU ADEQU		[]	
REMARKS A SHORT IOA REC FMEA.		RO: EN	SS 1 DS 1	A RLI REMOV	R TYPI VAL O	E RESI	ISTOR SHO	IS RT"	NOT A FAILUI	CREI	DIBLE DDE F	FAI ROM	LURI THIS	E. S

ASSESSM ASSESSM NASA FM	ENT ENT EA	' D' I	ATE:	1/29/ ARCS- 05-61	/88 -16 KA-	83 20	89-1						ASA DATA BASELINE NEW			
SUBSYST	EM:			ARCS 1683 RESIS												
LEAD AN	ALY	ST	:	D. HA	RT	MA	N									
ASSESSMI	ENT	:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C																
]	HD	W/FU	NC		A			В			С		TIE	M	
NASA IOA	[2 3	/1R /3]	[P]	[[F]	[P]	[X]	*
COMPARE	[N	/N]	[N]	[N]	[N]	[N]	
RECOMMEN	IDA:	ric	ONS:	(If	đ:	ifi	feren	it 1	fro	om 1	NASA))				
	[3	/2R]	[P]	[P]	[P	-	[D		ΓE)
* CIL RE	TE)	T	ON I	RATION	ALI	2:	(If	app	ol i	.cal	ole)					
REMARKS:												IAC	EQUATE EQUATE	į]	
NASA FME LOSS OF PROVIDED	ACC	LC	SS C	F ALL	ATT RE	.ON DU	OF NDAN	THE	: v	7.ΤΔ'	TR DC	CT	ттом т	PRIN	1033	7.037

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ASSESSME ASSESSME NASA FME	NT I	D:	ARCS	-1684	89-2				BASE		[
SUBSYSTE MDAC ID:			ARCS 1684 RESI		1.2	K 2W							
LEAD ANA	LYSI	? :	D. H	ARTMA	N								
ASSESSME	NT:												
		ICAL LIGH	ITY	R	EDUN	DANCY	SCR	EENS			CII		
		W/FU		A		В		C	2				
NASA IOA	[3	3 /3]	[]	[]	[]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DATI	ons:	(1	f dif	fere	ent fr	om N	ASA)					
	[/]	[]	[]	[]	(A	[DD/I] DELE	TE)
* CIL RE	TENI	MOIT	RATIO	NALE:	(If	appl	icab	Į	ADEQU. ADEQU.]	
REMARKS:	RENC	CES.		-									

ASSESSME ASSESSME NASA FME	: [[x											
SUBSYSTE MDAC ID:			ARCS 1685 RESIS	TOR,	5.1	K 1/4	W _.					
LEAD ANA	LYS	r:	D. HA	RTMA	N							
ASSESSME	NT:											
CRITICALITY REDUNDANCY SCREENS CIL ITEM												
			NC	A		В		С			ITE	M
NASA IOA	[3	3 /3]	[]	[]	[[]		[] *
COMPARE	[/]	[]	ſ]	[]	,	[]
RECOMMEN	DAT:	cons:	(If	dif	fere	nt fr	om 1	NASA)				
	[3	3 /2R]	[P]	[P]	[P]	(AI	[DD/D1] ELETE)
* CIL RE	TENT	rion	RATION	ALE:	(If	appl	icak					
									DEQUA DEQUA		-]
REMARKS: THIS FAI		. MAV	CAUSE	I OS:	S OF	ACCIII	ን ልጥ፣	E TNDT	ጉልጥፐ	N OF	ועניים י	F 1781 175
POSITION			DANCY									MAY LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

OPERATIONS.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1686 NASA FMEA #: 05-6KA-2088-1												DATA: LINE NEW	[]
SUBSYSTE MDAC ID: ITEM:				ARCS 1686 RESI	5	OR,	5.1	K 1/4	W					
LEAD ANA	LYS	T:		D. I	IAR'	TMA	M							
ASSESSME	NT:	}												
	CRITICALITY FLIGHT							DANCY	SC	REENS			CIL	
	HDW/FUNC						1	В	,	C	С			
NASA IOA	[[3	/3 /3]		[[]] []	[]		[] *
COMPARE	[/]		[]	[]	[]		[]
RECOMMEN	IDA:	ric	ns:	(Ιf	dii	ffere	nt fr	om	NASA)				
	[/	1		[.]	(]	[]	(A)	[DD/D] ELETE)
* CIL RE	ETE!	T	ON	RATI	ONA	LE	: (If	appl	ica	ble) ! IN!	ADEQI	UATE UATE	[]
REMARKS: A SHORT IOA RECO FMEA.	AC	ROS ENI	SS A	RLR EMOV	TY AL	PE OF	RESI THE	STOR "SHOF	IS RT"	NOT A FAILUI	CRE	DIBLE ODE F	FAI ROM	LURE. THIS

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1687 NASA FMEA #: 05-6KA-2088-1									ASA DATA BASELINE NEW] K]	
SUBSYSTEM MDAC ID: ITEM:			ARCS 1687 RESIS	TOR,	5.1K	1/4	w					
LEAD ANAI	LYST	:	D. HA	RTMA	N							
ASSESSMEN	T:											
c	ICAL:	ITY P	R	EDUNDA	ANCY	SCRE	ENS		CII			
	HD	W/FU	NC									
NASA IOA	[3	/3 /3]	[]	[]	[]	[]	*
COMPARE	[/]	[]	[]	[J	[
RECOMMEND	ATI	ons:	(If	dif	ferent	: fr	om NA	SA)				
	[3	/2R	1.	[P]	[P]	[P		[DD/D) ELE	TE)
* CIL RET	ENT	ION I	RATION	ALE:	(If a	ppl	icable			_		
DEMADUC.								INAI	DEQUATE DEQUATE	[]]	
REMARKS: THIS FAIL POSITION. TO FALSEL	R)	EDUNI	DANCY I	PROV	DED.	LOS	SS OF	ALL	REDUNDA	NCY	MAY	LEAL

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	NT I	D:	ARCS-	1688				_	BASEL		[
SUBSYSTE MDAC ID:			ARCS 1688 RESIS	ror,	5.1	K 1/4	W						
LEAD ANA	LYST	:	D. HA	RTMA	N								
ASSESSME	NT:												
	CRIT	ICAL LIGH		R	EDUN	DANCY	sc	REENS			CIL		
			NC	A		В		C	•		110	п	
NASA IOA	[3 [3	/3 /3]	[]]]]	[]		[]	*
COMPARE	[/]	[]	[]	[]		[}	
RECOMMEN	DATI	ons:	(If	dif	fere	nt fr	om i	NASA)					
	[/]	[]	[]	[]	(Al	[DD/D		TE)
* CIL RE		ION	RATION	ALE:	(If	appl	ica	A	DEQUA		_]	
REMARKS: A SHORT IOA RECO	ACRO												

FMEA.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1689 NASA FMEA #: 05-6KA-2087-1 NEW											[
SUBSYSTE MDAC ID:				ARCS 1689 RESIS	TOR,	5.1	K 1/4	W						
LEAD ANA	LYS	T:		D. HA	RTMA	N								
ASSESSME	NT:													
										CIL				
	FLIGHT HDW/FUNC A B C									ITEM				
NASA IOA	[3 ,	/3 /3]	[]	[]	[]		[]	*
COMPARE	[/]	[]	[]	[1		[]	
RECOMMEN	DAT	'IO	NS:	(If	dif	fere	nt fr	om N	IASA)					
	[3/2R] [P] [P] [] (ADD/DELETE)													
* CIL RETENTION RATIONALE: (If applicable)														
										DEQUA DEQUA]	
	THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE													
POSITION		RE	DUN	DANCY	PROV	IDED	. LO	SS C	OF ALL	REDU	JNDA	NCY	MA	LEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION

ASSESSMENT ASSESSMENT NASA FMEA):	1/29/8 ARCS-1 05-6KA				ASA DAT BASELIN NE]				
SUBSYSTEM: MDAC ID: ITEM:	:		ARCS 1690 RESIST	or,	5.1K	1/47	1					
LEAD ANALY	(ST:	:	D. HAF	(AMT	N							
ASSESSMENT	r:											
CI	CAL LIGH	ITY	RI	EDUND.	ANCY	SCRE	ENS		CIL			
			NC	A		В		C	!			
NASA IOA	[3 [3	/3 /3]	[]]]	[]	[]	*
COMPARE	[/]	[1	[]	[]	[]	
RECOMMENDA	ATI	ons:	(If	dif	feren	t fr	om NA	SA)				
	[/]	[]	[1	[]	[(ADD/I		TE)
* CIL RET	ENT:	ION	RATION	ALE:	(If	appl	icabl	P	DEQUATI]	
REMARKS: A SHORT A IOA RECOM FMEA.	CRO: MEN	SS A DS R	RLR T	YPE OF	RESIS THE "	TOR SHOR	IS NO T" FA	T A ILUF	CREDIB	LE FAI FROM	LUR THI	E. S

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1691 NASA FMEA #: 05-6KA-2087-1												[]
SUBSYSTE MDAC ID:				ARCS 1691 RESIS	TOR,	5.1	(1/4	W					
LEAD ANA	LY	ST	:	D. HA	RTMA	N							
ASSESSME	NT	:											
	CR:			ITY	SCR	EENS			CIL				
	1		LIGH W/FU	_	A			;		С		ITE	M.
NASA IOA	[3	/3 /3]	[]	[]	[]		[] *]
COMPARE	[/]	[]	[]	[]		[]
RECOMMEN	DA!	ΓI	ONS:	(If	dif	feren	t fr	om N	ASA)				
	[3	/2R]	[P]	[P]	[:	Ρj	(AD	[D/DE] ELETE)
* CIL RE			-						IN	ADEQUA ADEQUA	TE	[]
THIS FAI	HUI	Æ.	IANI	CAUSE	TOS	o or	ACCU.	KATE	IND.	ICATIO	N OF	THE	: VALVE

POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-169: 05-6KA-2		NASA DATA BASELINE NEW	[
0000101	ARCS 1692 RESISTOR	, 5.1K 1	/4W					
LEAD ANALYST:	D. HARTM	AN						
ASSESSMENT:								
CRITICAL FLIGH		REDUNDAN	CY SCREE	ns	CIL ITEM [] * [] ADD/DELETE [] [] E FAILURE.			
HDW/FU		A	В	С				
NASA [3 /3 IOA [3 /3] [] [] []	[]	[] *		
COMPARE [/] [] []	[]	[]		
RECOMMENDATIONS:	(If di	fferent	from NAS	SA)				
[/] [j f]	[]	-	-		
* CIL RETENTION	RATIONALE	E: (If a	plicable	a) ADEQUATE INADEQUATE]		
REMARKS: A SHORT ACROSS A IOA RECOMMENDS F FMEA.	A RLR TYPI REMOVAL OI	E RESIST(F THE "S)	OR IS NOT HORT" FAI	T A CREDIBLI	E FAII FROM '	LURE. THIS		

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1693 NASA FMEA #: 05-6KA-2088-1							L			ASA DATA BASELINI NEV] x]	
SUBSYST MDAC ID ITEM:				ARCS 1693 RESIS	TOR	, 5.1	LK 1/4	W					
LEAD AND	ALY	ST	':	D. HA	RTM	/N							
ASSESSMI	ENI	:											
	CRITICALITY RED FLIGHT								REENS		CI		
				NC	A B C						IT		
NASA IOA	[3	/3 /3]	[]	[]	[]	[]	*
COMPARE	(/]	[]	[]	[]	[]	
RECOMMEN	IDA	TI	ons:	(If	dif	fere	nt fr	om 1	NASA)				
	(3	/2R]	[P]	[P]	[P		[DD/I] DELET	ΓE)
* CIL RE	ETE	NT:	ION I	RATION	ALE:	(If	appl	ical					
REMARKS:									AC INAC	EQUATE EQUATE	[]	
THIS FAI POSITION TO FALSE	LU.	RJ	EDUNI	DANCY I	PROV	IDED	. Los	SS C	OF ALL	REDUNDA	NCV	MAV	T.FAT
ADDD 3							/			~	T11/3	エエエンご	TON

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-10 05-6KA	694		_		NE (IEW (X	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1694 RESIST	OR, 5.11	K 1/4W				
LEAD ANALYST:	D. HAR	TMAN					
ASSESSMENT:							
CRITICA FLIC		REDUN	DANCY S	CREENS		CII ITE	
		A	В	C	3		
NASA [3 /3 IOA [3 /3]	[]	[]	[]	[] *]
COMPARE [/	1	[]	[]	[]	[]
RECOMMENDATIONS	: (If	differe	nt from	NASA)			
[/]	[]	[]	. [1] DELETE)
* CIL RETENTIO	N RATIONA	LE: (If	applic	1	ADEQUA']
REMARKS: A SHORT ACROSS IOA RECOMMENDS FMEA.	A RLR TY REMOVAL	PE RESI OF THE	STOR IS	S NOT A	CREDI	BLE FA: E FROM	ILURE. THIS

ASSESSMI ASSESSMI NASA FMI	ENT ENT EA #	DATE: ID: :	1/29/ ARCS- 05-6K	1/29/88 NASA DATA: ARCS-1695 BASELINE [] 05-6KA-2088-1 NEW [X]									
SUBSYSTI MDAC ID: ITEM:	LM:		ARCS 1695 RESIS										
LEAD AND	ALYS'	T:	D. HA	RTMA	N								
ASSESSMI	ENT:												
TT TAUM											CIL		
			NC	A		В		С		ITE	E M		
NASA IOA	[]	3 /3 3 /3]]]	[]	[]	[] *]		
COMPARE	(/]	[]	[]	[]	[]		
RECOMMEN	IDAT:	ions:	(If	dif	feren	t fr	om NA	ASA)					
	[3	3 /2R	1	[P] ,	[P]	[P] (2	[ADD/D] ELETE)		
* CIL RE	TENT	rion 1	RATION	ALE:	(If	appl:	icabl	A	DEQUATE]		
REMARKS:													
THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION													

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME			N	BASEI									
SUBSYSTE MDAC ID: ITEM:	M:		ARCS 1696 RESI	STOR,	5.1	K 1/4	W						
LEAD ANA	LYS'	T:	D. H	ARTMA	M								
ASSESSME	NT:												
	TICAL FLIGH	ITY	DANCY	SCR	EENS			CIL					
		DW/FU		7	A	E	3	C	2				
NASA IOA	[3 /3 3 /3]	[[]	[[)]	[]		[]	*
COMPARE	[/	1	[]	[]	[]		[]	
RECOMMEN	DAT	ions:	(I	f di	ffere	nt fi	com N	IASA)					
	[/]	[]	[]	[]	(A	[DD/E		ETE)
* CIL RE	TEN	TION	RATIO	NALE	: (If	app:	licab	i	ADEQU. ADEQU.		[]	
REMARKS: A SHORT IOA RECO FMEA.	ACR	OSS A	A RLR REMOVA	TYPE L OF	RESI THE	(STOR SHO	IS N RT" F	OT A	CRED RE MO	IBLE DE F	FA] ROM	LUF THI	Œ. IS

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	NASA DATA BASELINE NEW									
SUBSYSTEM: MDAC ID: ITEM:		2K 2W								
LEAD ANALYST:	D. HARTMAN									
ASSESSMENT:										
CRITICALI FLIGHT	CIL									
	NC A	В	С	ITEM						
NASA [2 /1R IOA [3 /3] [P]] []	[F] [P]	[X] *						
COMPARE [N /N] [N]	[N]	и]	[N]						
RECOMMENDATIONS:	(If differe	ent from NASA	.)							
[3 /2R] [P]	[P] [[D] DD/DELETE)						
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []										
REMARKS: NASA FMEA CONSIDERS MULTIPLE FAILURES. THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.										
AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88 NSTS 22206 WAS										

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	ID:			N	IASA I BASEI	LINE]				
SUBSYSTE MDAC ID:			ARCS 1698 RESIS	STOR,	1.21	K 2W						
LEAD ANA	LYS'	T:	D. H2	ARTMA	N							
ASSESSME	NT:											
		TICAL FLIGH	T			IDANCY SCREENS CIL ITEM B C						
	H	DW/FU	NC	A		В		(2			
NASA IOA	[[3 /3 3 /3]	[[]	[]	[]	·	[] *]
COMPARE	[/]	[]	[]	[]		[]
RECOMMEN	DAT	ions:	(I:	f dif	fere	nt fr	om N	ASA)				
٠	[/]	[]	[]	[]	(A	[DD/I] DELETE
* CIL RE	TEN	TION	RATIO	NALE:	(If	appl	icab	1	ADEQU.]]
REMARKS:									-		•	-

NO DIFFERENCES.

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	ARCS-	1699					ASA DATA BASELINE NEW) ()			
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1699 RESIS	TOR,	5.11	K 1/4	!W							
LEAD ANALYST:	D. HA	RTMA	N									
ASSESSMENT:												
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM												
	FUNC	A		F	В С			LTE	:M			
NASA [3 / IOA [3 /	3] 3]	[]	[]	[]	[] *			
COMPARE [/]	[]	[]	[]	[]			
RECOMMENDATION	S: (If	dif	ferer	nt fr	om N	ASA)						
[3 /	2R]	[P]	[F	']	[P	-	[DD/D] ELETE)			
	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
POSITION. RED	REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE											

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1700 NASA FMEA #: 05-6KA-2088-1									1	NASA BASE		[]	
SUBSYSTEMDAC ID:				ARC 170 RES		5.1	.K 1/4	W							
LEAD ANA	\LY	ST	:	D.	HARTMA	AN									
ASSESSME	ENT	:													
	CR		ICAI LIGH		F	REDUN	IDANCY	SCR	EENS			CI	L EM		
				JNC	7	A	В	,	(2					
NASA IOA	[]	3	/3 /3]]]	[]]]]]	*
COMPARE	[/]	[]	[)	[]		[]	
RECOMME	NDA	TI	ONS	: (If di	ffere	ent fr	om N	IASA)						
	(/]	[]	ί]	[]	(A)		/DE		TE)
* CIL R	ETE	ENT	ION	RATI	ONALE	: (If	appl	icak		ADEQU ADEQU]	
REMARKS A SHORT IOA RECO FMEA.	AC	CRO MEN	SS I	A RLF REMOV	TYPE	RESI THE	ISTOR "SHOR	IS N	OT A	CRED	IBLE	F#	AIL	UR	E. S

ASSESSME ASSESSME NASA FME	I	D:	ARCS-	1701					NASA BASE	DATA: LINE NEW	[]	
SUBSYSTE MDAC ID:	M:			ARCS 1701 RESIS	TOR,	5.1H	(1/4	.w					
LEAD ANA	LY:	ST	:	D. HA	RTMA	N							
ASSESSME	NT	:											
CRITICALITY REDUNDANCY SCREENS CII FLIGHT ITE													
	1		N/FU		A		E	3		С		ITE	M
NASA IOA	[3	/3 /3]	[]]]	[]		[] *
COMPARE	[/]	[]	[]	[]		[]
RECOMMEN	DA'	ric	ons:	(If	dif	ferer	nt fr	om N	IASA)				
	[3	/2R]	[F)	[F)	[P]	(AD	[D/DI] ELETE)
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE [] REMARKS:													
THIS FAI	LUI	RE	MAY	CAUSE	LOS	S OF	ACCU	RATE	IND	ICATIO	ON OF	' THI	E VALVE

POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1702 NASA FMEA #: 05-6KA-2088-1										ASA D BASEI		_	']]	
SUBSYSTE MDAC ID:	M:			ARCS 1702 RESI		5.1	K 1/4	W						
LEAD ANA	LYS	T:	}	D. H	IARTMA	N								
ASSESSME	NT:	;												
	CR]			LITY	F	REDUN	DANCY	SCR	EENS			CIL		
	I		LIGH N/FU		P	1	в с			!				
NASA IOA	[3	/3 /3]	[]	[]	[]		[]	*
COMPARE	(/	1	[]	[)	[]		[3	
RECOMMEN	IDA'	rI	ons:	: (:	If di	ffere	nt fr	om 1	(ASA					
	[/]	ſ]	[]	[]	(A	[DD/I) DEL	ETE)
* CIL RI	ETE!	NΤ	ION	RATI	ONALE	: (I1	app]	lical	Æ	ADEQU ADEQU	ATE ATE	[]	
REMARKS A SHORT IOA REC FMEA.	30	RO EN	ss Ds	A RLR REMOV	TYPE AL OF	RES!	ISTOR "SHOI	IS 1 RT"	NOT A FAILUI	CRED	IBLE DE F	FA: ROM	LU: TH	RE. IS

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	E: 1/29/88 ARCS-1 05-6KA	8 703 - 2087-1		NASA D BASEL	ATA: JINE [] NEW [X]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1703	OR, 5.1K			
LEAD ANALYST:	D. HAR	rman			
ASSESSMENT:					
CRITIC FLI	ALITY	REDUNDA	ANCY SCR	REENS	CIL
	FUNC	A	В	С	ITEM
NASA [3 /: IOA [3 /:	3] [3] []	[]	[]	[] *
COMPARE [/] []	[]	[]	[]
RECOMMENDATIONS	: (If d	lifferent	from N	ASA)	
[3 /2	R] [Pj	[P]	[P]	[] (ADD/DELETE)
* CIL RETENTION	RATIONAL	Æ: (If a	pplicab		
REMARKS:				ADEQUAT	re į j
THIS FAILURE MAP POSITION. REDUTO FALSELY FAIR OPERATIONS.	NDANCY PR	OVIDED.	LOSS OF	F ALT. PEDIN	INANOV MAV TEAD

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1704					ASA DATA BASELINE NEW]
	ARCS 1704 RESISTOR,	5.1K	1/4W					
LEAD ANALYST:	D. HARTMA	N						
ASSESSMENT:								
CRITICAL		EDUNDA	ANCY	SCREE	:NS		CIL	
FLIGH HDW/FU			В	ВС				M
NASA [3 /3 IOA [3 /3] []	[]	[]	[] *]
COMPARE [/] []	[]	C	1	[]
RECOMMENDATIONS:	(If dif	feren	t fro	m NAS	A)			
[/) []	[]	[] (A	[DD/D:] ELETE)
* CIL RETENTION	RATIONALE:	(If a	appli	cable	AI	DEQUATE DEQUATE	-]
REMARKS: A SHORT ACROSS A IOA RECOMMENDS RI FMEA.					AC	CREDIBLE	FAI	

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	ARCS-17	05	NASA DATA: BASELINE [] NEW [X]									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1705 RESISTO	R, 5.1K	1/4W									
LEAD ANALYST:	D. HART	MAN										
ASSESSMENT:												
CRITICA FLIG	CIL ITEM											
	UNC	A	В	С	223.							
NASA [3 /3 IOA [3 /3] []	[]	[]	[] *							
COMPARE [/) []	[]	[]	[]							
RECOMMENDATIONS	: (If d	ifferent	from NA	ASA)								
[3 /2	R] [P]	[P]	[P]	[ADD/DELETE)							
* CIL RETENTION	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
POSITION. REDU	EMARKS: HIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE OSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD O FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION											

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1706 05-6KA-20				_	SA DATA BASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1706 RESISTOR,	5.1K	1/4W	ī				
LEAD ANALYST:	D. HARTMA	AN						
ASSESSMENT:								
CRITICAL FLIGH		REDUND	ANCY	SCREE	ens		CIL ITE	
HDW/FU		A	В		С			
NASA [3 /3 IOA [3 /3] []	[[]	[]	[] *
COMPARE [/] []	[]	[]	£]
RECOMMENDATIONS:	(If di	fferen	t fr	om NA	SA)			
[/] []	[]	[] (2	[ADD/D] ELETE)
* CIL RETENTION	RATIONALE	: (If	appl	icabl	A	DEQUATE DEQUATE]
REMARKS: A SHORT ACROSS A IOA RECOMMENDS I	A RLR TYPE REMOVAL OF	RESIS	STOR 'SHOR	IS NO	T A ILUR	CREDIBL E MODE	E FAI FROM	LURE. THIS

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM:	ENT EA EM:	; #:	D:	ARC 05- ARC 170 RES	S-17 6KA- S 7 ISTO	07 208 R,	8-1 5.1K					ASA D BASEL		[x]	
LEAD AN	ALY	ST	':	D.	HART	MAN										
ASSESSM	ENT	:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM																
			W/FU			A		в с					IT	EM		
NASA IOA	[3 3	/3 /3]	[;] []	[]		[]	*
COMPARE	[/]	[•) ()	[]		[]	
RECOMMEN	1DA	TI	ons:	(:	If di	iffe	erent	fro	mc	NASA)						
	[3	/2R]	[P]	[P]	[P]	(AI] DELE	TE)
* CIL RE	ETEI	T	ION I	RATIO	ONALE	: (If ap	pli	ica:	•						
REMARKS.												TAUQE TAUQE		[]	
THIS FAI	REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION															

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMEN ASSESSMEN NASA FMEA	T ! T :	DA' ID :	TE:	1/29 ARCS 05-6	ARCS-1708 05-6KA-2088-1 NEW [X]								
SUBSYSTEM MDAC ID:	1.			1708				1					
LEAD ANAI	LYS	T:		D. H	[ARTMA]	N .							
ASSESSME	T:												
(CRI		CAI LIGH		R	EDUN	DANCY	SCR	EENS		CIL ITEM		
	F	:											
NASA IOA	HDW/FUNC A B C SA [3/3] [] [] [] [] * OA [3/3] [] [] [] []												
RECOMMEN	DA'	TI:	ONS	: (If dif	fere	ent fr	om 1	nasa)				
					ι					1	[] (ADD/DELETE)		
* CIL RE	ETE	NT	!ION	RATI	ONALE	: (I:	f appl	lica			JATE []		
REMARKS: A SHORT ACROSS A RLR TYPE RESISTOR IS NOT A CREDIBLE FAILURE. IOA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FROM THIS FMEA.													
ISSUE R	ESC FA]	LLI LLI	VED URE	ON 1, MODE	/20/88 TO BE	AT REM	MEETI OVED)	NG W	ITH S	UBSY	STEM MANAGER		

ASSESSM ASSESSM NASA FM	EN?	[]	ID:	ARCS	-170	9 088-:	1		NASA DATA: BASELINE [] NEW [X]					
SUBSYST MDAC ID ITEM:				ARCS 1709 RESI		, 5.1	LK 1/4	IW			·	,		
LEAD AN	ALY	SI	: :	D. H.	ARTM	/N								
ASSESSM	ENT	:												
	CR	IT F	'ICAI 'LIGH	TTY	F	EDUN	DANCY	sc:	REENS		CI			
				NC	A B			1	С		IT	EM		
NASA IOA	[3	/3 /3]	[]	[]	[]]]] *]	ŧ	
COMPARE	[/]	[]	[J	[]	ι]		
RECOMMEN	IDA:	ri	ONS:	(If	dif	fere	nt fr	om N	JASA)					
ı	ſ	3	/2R	3	[P	3	[P]	[P	-] DELET	Έ)	
* CIL RE	TEN	T]	ON I	RATION	ALE:	(If	appli	icab	le)					
REMARKS:									INAD	EQUATE EQUATE	į	J		
THIS FAI POSITION TO FALSE OPERATION														

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMI ASSESSMI NASA FMI	ENT	ID:	ARC: 05-	9/88 5-171 6KA-2	1		ì	IASA BASE	LINE		x]		
SUBSYSTI MDAC ID: ITEM:			ARC:	5		lK 1/4							
LEAD AND	ALYS	T:	D. I	IARTM	AN								
ASSESSMI	ENT:												
	CRI	TICA	LITY	1	REDUN	DANCY	sc	REENS			CI		
			TUNC	2	A	В		c			ITI	EM	
NASA IOA]	3 /3 3 /3	;] ;]	[]]]]	[]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DAT:	IONS	: (1	f dif	fere	ent fro	om 1	NASA)					
	[/]	[]	[]	[]	(AI	[DD/E) ELE	TE)
* CIL RE	TEN	FION	RATIO	NALE:	(If	appli	cab	A	DEQUA		[]	
REMARKS:									DEQUA		•]	
A SHORT IOA RECO FMEA.	ACR(MME)	NDS	A RLR REMOVA	TYPE L OF	RESI THE	STOR I "SHORT	S N	OT A (FAILURI	CREDI E MOD	BLE E FF	FAI OM	LURI THIS	E. S

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-171	.1	NASA DATA: BASELINE NEW		
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1711 RESISTOR	R, 1.2K 2W	ī		
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
		REDUNDANO	CY SCREEN	S	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [2 /1F IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [N /N] [и] [и][и]	[N]
RECOMMENDATIONS:	(If d	ifferent :	from NASA	.)	
[3 /2]	?] [P] [P] [P] (A	[D] DD/DELETE)
* CIL RETENTION	RATIONAL	E: (If ap		ADEQUATE	
REMARKS: NASA FMEA CONSIDERS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, POR SECOND PROPERTY OF THE PROPERTY OF T	E INDICAT	ION OF THE	E VALVE I MAY LEAI	OSITION. TO FALSE!	Y FAILING THE

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1712 NASA FMEA #: 05-6KA-2089-2						2]	NASA DA BASELI N		x]
SUBSYSTI MDAC ID ITEM:			ARCS 1712 RESIS	STOR,	1.2	2K 2W					
LEAD AND	ALYS	ST:	D. HA	ARTMA	N						
ASSESSMI	ENT:	:									
	CRI	TICAL		R	EDUN	ID A NC	SCR	EENS		CII	
FLIGHT HDW/FUNC A					F	3	(2	ITI	EM	
NASA IOA]	3 /3 3 /3]	[]	[]	[]	[] *
COMPARE	[/]	[]	[]	[]	(]
RECOMMEN	IDAT	CIONS:	(If	dif	fere	nt fr	om N	ASA)			
	[/]	[]	[1	[1	[(ADD/E) ELETE
* CIL RE	TEN	TION	RATION	ALE:	(If	appl	icab	A	DEQUAT		į
REMARKS:								TNA	TDEGOWI.	c (j

NO DIFFERENCES.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1713 NASA FMEA #: 05-6KA-2088-1 NASA FMEA #: 05-6KA-2088-1]	
SUBSYSTEMDAC ID:	M:	ARCS 1713 RESIS	TOR,	5.1K	1/4	W					
LEAD ANA	LYST:	D. HA	RTMAI	Ŋ							
ASSESSME	NT:										
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM											
FLIGHT HDW/FUNC A B C											
NASA IOA	[3 /3]	[]	[[]	[]	[] *]	
COMPARE	[/]	[]	[]	[]	[]	
RECOMMEN	DATIONS	: (If	dif	feren	t fr	om NA	ASA)				
	[3 /2	R]	[P]	[P]	[]	P] (<i>1</i>	[ADD/D] ELETE)	
* CIL RE	TENTION	RATION	IALE:	(If	appl	icab:	1	ADEQUATE ADEQUATE]	
REMARKS:	REMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE DOCUMED OF THE VALVE										

TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION OPERATIONS.

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSME ASSESSME NASA FME	ID:	ARCS-1	L714				1	NASA DAT BASELIN NE		-		
SUBSYSTEMDAC ID:			ARCS 1714 RESIST	ror,	5.1K	1/4	W					
LEAD ANA	LYS	T:	D. HAI	RTMAI	1							
ASSESSME	ENT:											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM												
FLIGHT HDW/FUNC A B C										11	EM	
NASA IOA	[3 /3 3 /3]	[]	[]	[]	[]	*
COMPARE	[/]	[]	[]	(]	[]	
RECOMMEN	IDAT:	ions:	(If	dif	feren	t fr	om NAS	SA)				
	[/]	[]	[]	[] ([ADD/		ETE)
	CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []											
	SHORT ACROSS A RLR TYPE RESISTOR IS NOT A CREDIBLE FAILURE. OA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FROM THIS											

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		88-1		NASA DATA BASELINE NEW		
SUBSYSTEM:						
LEAD ANALYST:	D. HARTMAN	N				
ASSESSMENT:						
CRITICAL: FLIGHT	ITY RI	EDUNDAN	CY SCREE	ens	CIL ITEM	
HDW/FUI	NC A		В	С		
NASA [3 /3 IOA [3 /3] [] []	[]		*
COMPARE [/] [] []	[]	[]	
RECOMMENDATIONS:	(If dif	ferent	from NAS	SA)		
[3 /2R] [P] [P]	[P] (A	[]	TE)
* CIL RETENTION	RATIONALE:	(If ap	plicable	ADEQUATE	[]	
REMARKS: THIS FAILURE MAY POSITION. REDUNT TO FALSELY FAILURE	DANCY PROV	IDED.	LOSS OF	NDICATION O	F THE V	LEA

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1716 NASA FMEA #: 05-6KA-2088-1 NASA FMEA #: 05-6KA-2088-1 NASA FMEA #: 05-6KA-2088-1] x]				
SUBSYST MDAC ID ITEM:				ARC 171 RES	_	, 5.1	LK 1/4	w						
LEAD AN	ALY	ST	:	D.	HARTM	AN .								
ASSESSM	ENT	:												
	CR		ICAL LIGH	ITY	F	REDUN	IDANCY	SCF	REENS			CII		
		_		NC	7	1	В	,	C	2		ITE	SM.	
NASA IOA]	3 3	/3 /3]	[]	[]]]		[]	*
COMPARE	[/]	[]	[]	[]		[]	
RECOMME	NDA	TI	ons:	C	If dif	fere	ent fr	om N	IASA)					
	(/]	[]	(]	[]	(A)	[DD/[] DELE	TE)
* CIL R		NT:	ION	RATI(ONALE:	(If	appl	icab	P		ATE ATE	•]	
REMARKS A SHORT IOA RECO	AC:	ROS ENI	SS A	RLR EMOV	TYPE AL OF	RESI THE	STOR	IS N T" F	OT A 'AILUR	CRED E MO	IBLE DE FI	FAI ROM	LURI	E. S

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-17	717				ASA DATA BASELINE NEW]		
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1717 RESISTO	OR, 5.11	K 1/41	M						
LEAD ANALYST:	D. HART	rman -								
ASSESSMENT:										
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM										
HDW/FU		••								
NASA [3 /3 IOA [3 /3] [[]	[]	[]	[] *		
COMPARE [/] [[]	[]	[]	[]		
RECOMMENDATIONS:	(If d	differe	nt fr	om NA	SA)					
[3 /2R	.] [[P]	[P	1	[P] (A	[DD/D] ELETE)		
* CIL RETENTION	RATIONAL	LE: (If	appl	icabl	A	DEQUATE DEQUATE	[]		
REMARKS: THIS FAILURE MAY POSITION. REDUN TO FALSELY FAILI	DANCY PR	ROVIDED	. LO	SS OF	ALL	REDUNDA	NCY	MAY LEAD		

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1718 NASA FMEA #: 05-6KA-2087-1										ASA D BASEL	INE			
SUBSYSTE MDAC ID:		ARCS 1718 RESI	K 1/41	Ñ										
LEAD ANA	LYS	T:	:	D. I	IARTMA	N								
ASSESSME	NT:	3												
	CR1		[CAL		R	EDUN	DANCY	SCF	REENS			CIL		
	F			NC	A		В		c	:				
NASA IOA	[3 3	/3 /3]]]] []	[[]		[]	*
COMPARE	[/]	[]	[]	[3		[]	
RECOMMEN	'DA'	ric	ons:	(:	If dif	fere	ent fr	om 1	NASA)					
	[/]	[]	[]	[3	(A	[DD/D		TE)
* CIL RE	TE	T	ION	RATI	ONALE:	(If	appl	icak	7	ADEQUA ADEQUA]	
REMARKS: A SHORT IOA RECO	ACI	RO: EN	SS A	REMOV	TYPE AL OF	RESI THE	STOR "SHOR	IS 1	A TON	CREDI	BLE	FAI	LUF	₹E.

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	: 1/29/88 ARCS-1719 05-6KA-20	9 087 - 1		NASA DATA BASELINI NEV							
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1719	, 5.1K 1/4									
LEAD ANALYST:	D. HARTMA	AN									
ASSESSMENT:											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM											
FLIGHT ITEM HDW/FUNC A B C											
NASA [3 /3 IOA [3 /3] [] []	[]	[] *						
COMPARE [/] [] []	[]	[]						
RECOMMENDATIONS	: (If dif	ferent fr	om NAS	5A)							
[3 /2	R] [F) [P	1	[P] (A	[] ADD/DELETE)						
* CIL RETENTION	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []										
POSITION. REDU	EMARKS: THIS FAILURE MAY CAUSE LOSS OF ACCURATE INDICATION OF THE VALVE POSITION. REDUNDANCY PROVIDED. LOSS OF ALL REDUNDANCY MAY LEAD TO FALSELY FAILING THE VALVE CLOSED, POSSIBLY EFFECTING MISSION										

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1720 NASA FMEA #: 05-6KA-2087-1 ARCS NASA DATA: BASELINE [] NEW [X]											
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1720 RESIS			1/4W							
LEAD ANALYST:	D. HA	RTMAN	ſ								
ASSESSMENT: CRITICA	LITY	RI	EDUND	ANCY	SCRE			CIL ITE			
FLIG HDW/F	HT	A		В		C			۱ *		
NASA [3 /3	;]	[[]	[[]	[[]	ĺ]		
IOA [3 /3	-	[1	ſ	3	ĺ	1	[]		
RECOMMENDATION		f di	ffere	nt fi	com N	iasa)			_		
RECOMMENDATION [/		[(ADD/1) DELETE)		
* CIL RETENTION						1.	MADER	ATE []		
REMARKS: A SHORT ACROSS A RLR TYPE RESISTOR IS NOT A CREDIBLE FAILURE. IOA RECOMMENDS REMOVAL OF THE "SHORT" FAILURE MODE FROM THIS FMEA.											
ISSUE RESOLVE (SHORT FAILUF	D ON 1, E MODE	/20/8 TO B	8 AT E REI	MEET MOVED	ING \	WITH	SUBSY	STEM MAI	NAGER		

ASSESSI ASSESSI NASA FI SUBSYST MDAC II ITEM: LEAD AN	MEA TEM:	#: ST:	ARC 05- ARC 172 RES	CS-17 -6KA- :S 1 ISTOR	21 2088- R, 5.		′4W		NAS, BA:	A DATA: SELINE [NEW [X]	!
	CR]	TICA	LITY								
		FLIGI	HT	•	KEDUI	NDANC	Y SC	CREENS		CIL	
	H	IDW/FU	JNC	1	4	,	В			ITEM	
Naca				_	-		_		C		
NASA IOA	ľ	3/3	j	[]	Γ	1	r	,		
	L	3 / 3	1	[]	Ì	j	[j	[]	*
COMPARE	[/	ו	г]				J	[]	
			•	L	J	[]	[]	[]	
RECOMMEN	רידי בער	TONG.		.						- ,	
RECOMMEN		LONS;	(1:	dif	fere	nt fr	om 1	VASA)			
	[3	/2R]	[P	3	[P]	[P]	, []	
* CIL REI	ENT	ION F	MTION	ALE:	(If	appli	icah	lev		(ADD/DELET	'E)
					•	-FF-	LCap		EQUA	mn -	
REMARKS: THIS FAIL	URE	MAV	Callen	T.0.0.0				INAL	EQUA	TE j	
POSITION. TO FALSEL' OPERATIONS	RI Y FA	EDUND	ANCY I	PROVI VALV	OF DED.	ACCUR LOS DSED,	ATE S OI POS	INDIC F ALL SSIBLY	ATIO REDUI EFF	TE [] N OF THE VAI NDANCY MAY ECTING MISSI	LVE LEAD ION

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSM ASSESSM NASA FM	EN	T :	ID:	AR	29/88 CS-17: -6KA-2	2.2	1			NASA BASI	ELIN		у] х]	
SUBSYST MDAC ID ITEM:				AR 17: RE:		₹, 5.	1K 1/	4W						
LEAD AN	AL	YSI	::	D.	HARTN	IAN								
ASSESSM	EN'	T:												
	C	RIT F	'ICA: 'LIGI	LITY HT		REDUI	NDANC	Y SCI	REENS			CI		
				UNC		A	1	В	•	C		IT	EM	
NASA IOA		[3 [3	/3 /3]	[]	[]	[]		[] *	
COMPARE	ĺ	[/	J	[]	[]	Ε]		[J	
RECOMMEN	ID#	TI	ONS:	(If di	ffere	ent fr	om N	ASA)					
	[•	/	3	. []	[]	[]	(Al	[DD/D] ELET	E)
* CIL RE	TE	NT:	ION	RATI	ONALE	: (If	appl	icab		DEQU	ATE	[1	
REMARKS:									INA	DEQU	ATE	[]	
A SHORT IOA RECO FMEA.	AC MM	ROS	SS A	RLR EMOV	TYPE AL OF	RESI THE	STOR "SHOR	IS NO	OT A AILUR	CRED:	IBLE DE FF	FAI ROM	LURE. THIS	

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSME ASSESSME NASA FME	NT	ID	:	ARCS-1	723	8-1				SA DATA: ASELINE NEW]	
SUBSYSTE MDAC ID:				ARCS 1723 RESIST	OR,	5.1K	1/4W	v					
LEAD ANA	LYS	T:		D. HAR	TMAN	ī							
ASSESSME	NT:	}											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HOW FINC A B C													
FLIGHT HDW/FUNC A B C													
NASA [3 /3] [] [] [] [] [] []] *]	
COMPARE	[/]	[]	(]	[]	[]	
RECOMME	NDA'	TI	ons:	(If	dif	feren	t fr	om NA	SA)				
	(3	/2R]	[P]	[P]	[P] (A	[DD/D] ELETE)	
* CIL R	ETE	NT	ION	RATION.	ALE:	(If	appl	icabl	A	DEQUATE DEQUATE	[]	
	ILU	-	TOTAL	こうしょうしん スペン	זזחסס	THEID.	1.4	ISS OF	ALL	CATION C REDUNDA Y EFFECT	77.10	Litte marra	

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMI ASSESSMI NASA FMI	ENT ENT E A	I #:	ATE:	1/2 ARC 05-	9/88 S-1724 6KA-20	1 088-:	1			nasa Basi	DATA ELINE NEW	[x]	
SUBSYSTI MDAC ID: ITEM:	EM:			ARC 172	S									
LEAD ANA	LY	ST	:	D. :	HARTMA	M								
ASSESSME	ENT	:												
	CR	ΙΤ	ICAL LIGH	ITY	F	EDUN	IDANC?	SCF	REENS			CII		
	1			NC	A	L	I	3	(С		ITI	EM	
NASA IOA	[3	/3 /3]	[]]]]	[]		[]	*
COMPARE			/		[[]	
RECOMMEN	DA'	PI(ons:	(:	If dif	fere	nt fr	om N	ASA)					
	[/]	[]	[]	[]	(A)	[DD/E] DELE	TE)
* CIL RE	TEN	T)	ION :	RATIO	NALE:	(If	appl	icab		DEQU.	ATE	ſ	1	
REMARKS:										DEQU		į	j	
A SHORT IOA RECO FMEA.	ACF MME	ROS	SS A DS R	RLR EMOVA	TYPE L OF	RESI THE	STOR "SHOR	IS No.	OT A AILUF	CRED	IBLE DE FI	FAI ROM	LUR THI	E. S

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-172 05-6KA-2	5 089-1		NASA DATA: BASELINE NEW	[x]						
SUBSYSTEM:	ARCS 1725 RESISTOR										
LEAD ANALYST:	D. HARTM	IAN									
ASSESSMENT:											
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM											
HDW/FU		A	В	С							
NASA [2 /1R IOA [3 /3	[P] []	[X] * []									
COMPARE [N /N] [и]	[N]	[N]	[и]						
RECOMMENDATIONS:	(If d	ifferent	from NAS	SA)							
[3 /2R	.] [P]	[P]	[P] (A	[D] DD/DELETE)						
* CIL RETENTION	RATIONAL	E: (If a	pplicable	e) ADEQUATE INADEQUATE							
REMARKS: NASA FMEA CONSIDER LOSS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, PO	INDICAT	ION OF TEDUNDANC	THE VALVE	POSITION. AD TO FALSEL	Y FAILING THE						

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	NТ	ID		ARC	:S-1	726	39-2			N	BASEL	INE			
SUBSYSTE MDAC ID:	M:			ARG 172 RES	26	OR,	1.28	2W							
LEAD ANA	LYS	T:		D.	HAR	TMA	N								
ASSESSME	NT:														
			YTI		R	EDUNI	DANCY	SCR	EENS			CIL			
	F		JIGH I/FU			A		В	•	(2				
NASA IOA] [3	/3 /3]		[]	[]	[]		[]	*
COMPARE	[/]		[]	[]	[]		[]	
RECOMMEN	IDA'	ric	ONS:	;	(If	dif	fere	nt fr	om N	IASA)					
	[/]		נ)	[]	[]	(A	[.DD/I) EL	ETE)
* CIL RI	ETE	NT:	ION	RAT	ION	ALE:	(If	app]	licab		ADEQUA		[]	
DEMARKS	•														•

NO DIFFERENCES.

ASSESSM ASSESSM NASA FM	ENT ENT EA	' D' '	ATE: D:	1/29/ ARCS- 05-68	/88 -172 (A-2	:7 :088-1	L		1	NASA DAT BASELIN NE		x]		
SUBSYST MDAC ID ITEM:	LM:			ARCS 1727 RESIS										
LEAD AN	ALY	ST	:	D. HA	RTM	AN								
ASSESSMI	SSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
FLIGHT ITEM HDW/FUNC A B C														
NASA IOA	[3 3	/3 /3]	[]	[]	[]	[] *		
COMPARE	[/]	[3	[]	[1	[1		
RECOMMEN	IDA!	ric	ons:	(If	di:	ffere	nt fr	om N	ASA)					
	[3	/2R]	[]	P]	[P]	[P] DELETE)		
* CIL RE	TEI	(TV	ON F	RATION	ALE:	(If	appl	icab	•	DEQUATE	r	1		
REMARKS:									INA	DEQUATE	. •]		
THIS FAI POSITION TO FALSE OPERATIO	LY	FA	DUNL	ANCY I	PROV	IIDED.	. In	55 A	F ATT	DEDIMOR	MOW	M3W TESS		

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

ASSESSMI ASSESSMI NASA FMI	ENT	II):	ARC	S-1728				N	IASA BASE		[
SUBSYSTEMDAC ID:				ARC 172 RES		5.1	K 1/4	W						
LEAD ANA	ALYS	T:	;	D.	HARTMA	AN								
ASSESSMI	ent:													
	CRI		CAL LIGH		F	REDUN	DANCY	SCF	REENS			CII		
	H			NC	P	A	В		C	:			11.1	
NASA IOA] [3	/3 /3]	[[]]]]]]		[]	*
COMPARE	[/]	[]	C	3	[]		[]	
RECOMMEN	radr	CIC	ons:	(If dif	fere	nt fr	om N	IASA)					
	[/]	[]	Γ]	[]	(A)	[DD/I		ETE)
* CIL RI	ETEN	T	ON	RATI	ONALE:	(If	appl	icak	P	DEQU DEQU]	
REMARKS: A SHORT IOA RECO FMEA.	ACF								OT A	CRED	IBLE	FA]	LUI	

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMEI NASA FME	NT I	D:	ARCS-	1729	88-1				BASELINE NEW]		
SUBSYSTEM MDAC ID:			ARCS 1729 RESIS	ror,	5.1K	1/4	N						
LEAD ANA	LYSI	?:	D. HA	RTMA	N								
ASSESSMEI	NT:												
(R	EDUND	ANCY	SCREI	ens		CII	-		
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C													
NASA IOA	[3	/3]	[]	[[]	[]	[]	*	
COMPARE	[/]	[]	[]	[]	[]		
RECOMMEN	DATI	ons:	(If	dif	ferent	t fro	om NAS	SA)					
	[3	/2R]	[P]	[P]	[P		[DD/D] ELE	TE)	
* CIL RE	rent	I MOI	RATION	ALE:	(If a	appli	icable	. Al	DEQUATE	[]		
REMARKS: THIS FAIL POSITION TO FALSE	. R	EDUN	DANCY 1	PROV	IDED.	LOS	SS OF	NDI ALL	REDUNDA	F TH NCY	MAY	LEAI	

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMI ASSESSMI NASA FMI	ENT :	ID:		-1730				N	IASA I BASEI		[_	
SUBSYSTI MDAC ID: ITEM:			ARCS 1730 RESI		5.1	K 1/4	.W						
LEAD AND	ALYS'	T:	D. H	ARTMA	N								
ASSESSM	ENT:												
		TICAL		F	REDUN	DANCY	SCR	EENS			CIL		
		FLIGH DW/FU	INC	7	\	I	3	(2				
NASA IOA	[3 /3 3 /3]	((]	[]	[]		[]	*
COMPARE	[/]	[]	[3	[)		[]	
RECOMME	NDAT	IONS	: (1	f di	ffere	ent f	rom N	IASA)					
	[/]	[]	[]	[]	(A	[DD/I	-	TE)
* CIL R	ETEN	TION	RATIO	NALE	: (If	app	licab		ADEQU. ADEQU		[]	
REMARKS A SHORT IOA REC	ACE	ROSS :	A RLR REMOVA	TYPE AL OF	RESI THE	STOR SHO	IS N RT" I	OT A	CRED RE MO	IBLE DE F	FA] ROM	LUR THI	Œ. S

ISSUE RESOLVED ON 1/20/88 AT MEETING WITH SUBSYSTEM MANAGER (SHORT FAILURE MODE TO BE REMOVED).

ASSESSMI ASSESSMI NASA FMI	ENT II		ARCS-	1731				N	IASA I BASEI		[]	
SUBSYSTE MDAC ID:			ARCS 1731 RESIS	TOR,	5.18	(1/4	W						
LEAD ANA	LYST:	:											
ASSESSME	ENT:												
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C													
	HDW	/FUI	NC	A		В	i .	С	!			1.1	
NASA IOA	[3	/ /3]	[]	[]	[]		[] *	k
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	DATIC	NS:	(If	dif	feren	t fr	om NA	SA)					
	C	/]	[]	[]	Ţ]	(AD	[[D/D] ELEJ	CE)
* CIL RE	TENTI	ON F	RATION	ALE:	(If	appl	icabl	e)					
REMARKS:									DEQUA DEQUA		[]	
AFT MANI IN CIRCU	FOLD	ISOI SE	ATION E ASSE	VAL' ESSMI	VE #5 ENT I	RE-A	ANALY:	ZED 1	BY IO X-120	A DU 75X.	ЕТ) CH	lange

ASSESSMEN ASSESSMEN NASA FMEA	T ID:	ARCS-1	732					ASA DAT BASELII N		[]			
SUBSYSTEM MDAC ID:	i :	ARCS 1732 RESIST	or,	5.1K	1/4	W								
LEAD ANAI	YST:													
ASSESSMEN	NT:									677				
(CRITICALITY REDUNDANCY SCREENS CIL ITEM FLIGHT HDW/FUNC A B C													
HDW/FUNC A B														
NASA [/] [] [] [] * [] TOA [3 /3] [] [] []														
COMPARE	[и/и]	[1	[]	[]		[]			
RECOMMEN	DATIONS	: (If	dif	ferer	it fi	rom N	ASA)							
	[/		[1	Ι]	ί]	(A	[.DD/I		ETE)		
* CIL RE	ETENTION	RATION	IALE	: (If	app	licak	-	ADEQUA' ADEQUA		[]			
REMARKS: AFT MANI IN CIRCU	: [FOLD IS JITRY.	OLATION SEE ASS	VA SESS	LVE #	5 RE IDs	-ANA] ARCS	LYZED 1200	BY IO 1X-120	A [75}	OUE '	ro (CHANGE		

ASSESSM ASSESSM NASA FM	ENT	ני	D:		S - 173	3				NASA BASI	DAT? ELINI NEV] 2]		
SUBSYST MDAC ID ITEM:				ARC: 173: RES:	3	, 5.	1K 1/	4 W					-		
LEAD AN	ALY	ST	':												
ASSESSMI	ENT	:													
	CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HDW/FUNC A B C														
]	HD	W/FU	NC	7	3	•	C		TT	EM				
NASA IOA	[3	/3]]	[]]] *]					
COMPARE	[N	/N]	[]	[]	Į]		[]		
RECOMMEN	DA'	ric	ons:	(I	f dif	fere	nt fr	om N	'ASA)						
			/]	[]	ξ]	[]	(AI	[DD/E] ELETI	歪)	
* CIL RE	TEN	T]	ON F	OITAS	NALE:	(If	appl	icab	le)						
REMARKS:									INA	DEQUA DEQUA	ATE	[]		
AFT MANI	FOL ITR	D Y.	ISOI SE	ATION E ASS	N VAL	VE #	5 RE- IDs Al	ANAL:	YZED 12001	BY IC X-120	A DU 75X.	E T	О СНА	NGE	

ASSESSM ASSESSM NASA FM	ENT	ľ		=	NASA DATA: ARCS-1734 BASELINE [] NEW []								
SUBSYST MDAC ID ITEM:				ARCS 1734 RESI		5.1	K 1/4	W					
LEAD AN	ALY	ST	:										
ASSESSM	ENT	:											
	CR		ICA:	LITY	RI	EDUN	DANCY	SCF	REENS			CI	
			W/F	-	A		В		C	2		TT	EM
NASA IOA	[3	/ /3]	[]	[]	[]		[] *
COMPARE	[N	/N]	[]	[]	[]		[]
RECOMME	NDA'	TI	ONS	: (1	f diff	fere	nt fr	om N	IASA)				
	[/]	[]	[]	[3	(AD] DELETE)
* CIL RI		NT:	ION	RATIC	NALE:	(If	appl:	icab	A	DEQUA'	TE TE	[]
	FO:											Ε	TO CHANGI

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:				BASELINE NEW]
MDAC ID:	ARCS 1735 RESISTOR,	5.1K 1/4V	ī			
LEAD ANALYST:						
ASSESSMENT:						
	LITY R	EDUNDANCY	SCREENS	5	CIL ITEM	
FLIG HDW/F		В		С	11111	
NASA [/ IOA [3 /3] [] [] []	[) *]
COMPARE [N /N] [] [] [1	C]
RECOMMENDATIONS	: (If dif	ferent fr	om NASA)		
[/] [] [] [] (Al	[DD/DE	
* CIL RETENTION	RATIONALE:	(If appl		ADEQUATE NADEQUATE	[]
REMARKS: AFT MANIFOLD IS IN CIRCUITRY.	OLATION VAI SEE ASSESSM	LVE #5 RE- MENT IDS A	ANALYZE	D BY IOA D	UE TO	CHANGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1	736			NA E	SA DA ASELI N	TA: NE [] EW []					
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1736 RESIST	oR,	5.1K	1/4	A							
LEAD ANALYST:												
ASSESSMENT:								CIL				
CRITICALITY REDUNDANCY SCREENS ITEM												
FLIG HDW/F		A			3	С						
NASA [/ IOA [3 /3	_	[]	[]	[]	[] *				
COMPARE [N /N		[1	[]	[3	[]				
RECOMMENDATIONS	: (If	di	ffere	nt f	rom N	ASA)						
RECOMMENDATIONS	-]]	[]	[] (ADD/DELETE)				
* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []												
REMARKS: AFT MANIFOLD ISOLATION VALVE #5 RE-ANALYZED BY IOA DUE TO CHANGE IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.												

ASSESSI ASSESSI NASA FI SUBSYST MDAC ID ITEM:	ENT EA EM:	' ID: #:	ARC:	7		1K 1/	4W		NASA BASI	DATA: ELINE NEW	[]	 -
ASSESSM	ENT:	:											
		TICA: FLIGI IDW/FU			REDUI A		Y SC:	REENS			CIL ITE		
				A			•	(С				
		3 /3]	[]	[[]	[]		[]	*
COMPARE	[]	N /N]	[]]	[]	l]	
RECOMMEN	DAT:	IONS:	(II	dif	fere	nt fr	om N	(ASA)					
	[]	-				. []] (ADD)	/DF] !T.E'	ጥፔን
* CIL RE	TENI	CION 1	RATION	ALE:	(If	appl	icah	۱۵۱		(=====	, 21		111)
REMARKS:								A INA	DEQUA'	TE i]	
AFT MANII	OLD TRY	ISOI • SE	LATION EE ASS	VAL ESSM	VE #5 ENT 1	RE-A	NALY RCS 1	ZZED 1 L2001	BY 102 K-1207	A DUE	то	CH	IANGE

ASSESSMI NASA FMI	ENT :	ID:	ARCS	5-1738				NASA I BASEI		[]			
SUBSYSTE MDAC ID:			ARCS 1738 RESI	}	5.1K 1	L/4W								
LEAD ANA	ALYS	r:												
ASSESSME	ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
	FLIGHT HDW/FUNC A B C													
NASA IOA	[:	3 /3] *			
COMPARE	[]	N /N]	[] []	[]		[]			
RECOMMEN	NDAT:	cons:	(1	f diff	erent	from	NASA)							
	[/]	[] (]	[]	(AI	[/dc] DELET:	E)		
* CIL RE		TION	RATIC	NALE:	(If ar	plica		ADEQU <i>A</i> ADEQU <i>A</i>		[]			
AFT MAN	•	o Iso	LATIC	N VAL	/E #5 F	RE-ANA	LYZED	BY IC	A DU	JΕ	то сн	ANGE		

IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.

ASSESSMI ASSESSMI NASA FMI	ENT	I		ARCS	5-1739				N	BASE		[]	
SUBSYSTEMDAC ID				ARCS 1739 RESI		5.1	K 1/41	v						
LEAD AN	ALY	ST	:											
ASSESSM	ENT	:												
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
	j		W/FU		A	В		c	:		1,1	. em		
NASA IOA	[[3	/3]	[]	[]	[]		[[]	*
COMPARE	ί	N	/N]	[]	[]	[]		[]	
RECOMME	NDA	TI	ons:	(:	If dif	fere	nt fro	om N	IASA)					
	[/	3	[]	ſ]	[]	(Al		DEL 'DEL	ETE)
* CIL R		NT:	ION	RATIO	ONALE:	(If	appl	icab	A	DEQU.]	
AFT MAN		LD	ISO	LATI	ON VAL	VE #	5 RE-	ANAI	YZED	BY I	OA DI	JΕ	то	CHANGE

IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	ARCS-174	NASA DATA: RCS-1740 BASELINE [] NEW []											
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1740 RESISTOR	, 5.1K 1,	/4W										
LEAD ANALYST:													
ASSESSMENT:													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM													
		A	В	С	ITEM								
NASA [/ IOA [3 /3] [] []	[]	[] *								
COMPARE [N /N] [] []	[]	[]								
RECOMMENDATIONS	(If di	fferent f	rom NA	SA)									
[/] [] []	[]	[] (ADD/DELETE)								
* CIL RETENTION	RATIONALE	: (If app	licabl	e) ADEQUAT INADEQUAT									
REMARKS: AFT MANIFOLD ISO IN CIRCUITRY. S	LATION VAI	LVE #5 RE MENT IDs	-ANALY ARCS 1	ZED BY IOA 2001X-1207	DUE TO CHANGE								

ASSESSMENT ASSESSMENT NASA FMEA #	ID:	ARCS-1	741					SA DATA: ASELINE NEW]
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1741 RESIST	OR,	1.2K	2W					
LEAD ANALYS	T:									
ASSESSMENT:										
	TICAL		RE	DUNDA	NCY	SCREE	NS		CIL	a.
	FLIGHT DW/FU		A		В		С		1111	
NASA [IOA [3 /3]	[]	[]	[]	[[] *]
COMPARE [n /n	1	[]	[]	[]	[]
RECOMMENDAT	cions:	(If	diff	erent	fro	om NAS	A)			
Ţ	/	1	[]	[1	[] (A)	[DD/D] ELETE)
* CIL RETEN	TION	RATIONA	LE:	(If a	ppli	icable	e) Al INA	DEQUATE DEQUATE	[]
REMARKS: AFT MANIFOI IN CIRCUITE	LD ISO RY. S	LATION EE ASSE	VALV ESSMI	VE #5 ENT II	RE-A	ANALYZ RCS 12	ZED 1	BY IOA D X-12075X	UE T	O CHANGE

ASSESSMEN ASSESSMEN NASA FMEA	T ID:	ARCS-1	742				SA DATA BASELINE NEW	[]				
SUBSYSTEM MDAC ID:	I :	ARCS 1742 RESIST	oR,	1.2K	2W								
LEAD ANAI	LYST:												
ASSESSME	T:												
CRITICALITY REDUNDANCY SCREENS CIL ITEM													
	FLIGH HDW/FU		A		В		С						
NASA IOA	_		[]	[]	[[]]	[] *			
COMPARE			[3	[]	[3	[]			
RECOMMEN	DATIONS	: (If	dif	feren	t fr	om N	ASA)						
KECOMILIA	[/]] ([ADD/1] DELETE)			
* CIL RE	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []												
REMARKS: AFT MANI IN CIRCU	REMARKS: AFT MANIFOLD ISOLATION VALVE #5 RE-ANALYZED BY IOA DUE TO CHANGE IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.												

ASSESSM ASSESSM NASA FM	ENT	r]	[D:	: ARCS	-174	3				NASA I BASEI]
SUBSYST MDAC ID ITEM:		•		ARCS 1743 RESI	STOR	, 5.	1K 1/	4W				•	1
LEAD AN	ALY	SI	:										
ASSESSMI	ENT	·:											
		F	ICAI LIGI	REENS			IL						
		HD	W/Ft	INC	2	1	1	3	(С	I'.	rem	
NASA IOA	[3	/3]	[]	[]	[]	[]	*
COMPARE			/N		[]	[]	Į]	[]	
RECOMMEN	DA]	ric	ons:	(If	dif	fere	nt fr	om N	(ASA)				
	[/]	[]	[3	[]	[(ADD/] DELI	ETE)
* CIL RE	TEN	TI	ON	RATION	ALE:	(If	appl	icab	le)				•
REMARKS:									A INA	DEQUAT DEQUAT	E []	
AFT MANII	FOL ITR	D Y.	ISO SI	LATION EE ASSI	VALV ESSMI	VE #! Ent :	5 RE-1 IDs Al	ANAL RCS	YZED 12001	BY IOA X-1207	DUE 1	ro c	HANGE:

ASSESSMEN' ASSESSMEN' NASA FMEA	r]	[D	re:	ARC	:S-17	44					SA DA BASELI		[]	
SUBSYSTEM MDAC ID: ITEM:				ARC 174 RES	4	or,	5.1K	1/4	W						
LEAD ANAL	YS'	T:													
ASSESSMEN	T:														
CRITICALITY REDUNDANCY SCREENS CIL ITEM															
			JIGH I/FU			A		E	3	C					
NASA IOA	[3	/]		[[]	[]	[]		[] *	
COMPARE	[N	/N]		[]	(]	[]		[]	
RECOMMEN	DA'	ric	ONS	:	(If	dif	fere	nt fi	rom N	ASA)					
						[3	[]	(]	(A	[DD/I] DELETE	;)
* CIL RE	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []														
REMARKS: AFT MANI IN CIRCU	REMARKS: AFT MANIFOLD ISOLATION VALVE #5 RE-ANALYZED BY IOA DUE TO CHANGE IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.														

ASSESSM ASSESSM NASA FM	EN?	r :	ID:		S-174		NASA BAS	DATA ELINE NEW	. []				
SUBSYST	EM:	;		ARCS 1745 RESI	5	, 5.	1K 1/	4W					J	
LEAD AND	ALY	SI	?:											
ASSESSME	ENT	':												
	CR		ICAI LIGH	JITY IT	I	REDUI	NDANC:	c sc	REENS			CI	L	
				NC	2	A	1	3	(2		IT	EM	
NASA IOA	[3	/3]	[[]	[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	DA'	rio	ONS:	(I:	f dif	fere	nt fr	om 1	VASA)					
	[/]			[)	(AD] DELE:	TE)
* CIL RE	ren	T)	ON I	RATION	VALE:	(If	appl	icab						•
REMARKS: AFT MANII	ADEQUATE []													
IN CIRCUI	ETR	Y.	SE	EE ASS	ESSMI	VE #: ENT]	DS AL	ANAL 209	YZED	BY IC	DA DU	E T	O CI	IANGE

IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.

ASSESSM ASSESSM NASA FM	ENT	' I	D:	ARCS-	-1746	5			1	NASA BASE	DATA LINE NEW	[]	
SUBSYSTIMDAC ID				ARCS 1746 RESIS	STOR,	5.1	LK 1/4	4 W						
LEAD AND	ALY	ST	':											
ASSESSMI	ENT	:												
	CR		ICAL LIGH	ITY T	R	EDUN	IDANCY	SCE	REENS			CII	_	
				NC	A		F	3	C	:		111	LM	
NASA IOA	[3	/3]	[]	[[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMEN	DA!	ri	ons:	(If	dif	fere	nt fr	om N	IASA)					
	[/]	[]	[]	ſ]	(AI	[)D/E] ELE	TE)
* CIL RE	TEI	VT:	ION I	RATION	ALE:	(If	appl	icab	A	DEQU <i>I</i> DEQU <i>I</i>		[]	
REMARKS: AFT MANI IN CIRCU	FOI ITE	LD	ISOI SE	ATION E ASSI	VALV ESSMI	VE #! ENT :	5 RE-	ANAL RCS	YZED	BY IC	A DU	•	-	HANGE

ASSESSMENT ASSESSMENT NASA FMEA	' ID	TE:	ARCS-1	747								SA D ASEL]	
SUBSYSTEM: MDAC ID: ITEM:	:		ARCS 1747 L/R OX	&	FU	TK :	IS	OL	VLV	1/	2	SWIT	СН			
LEAD ANALY	ST:															
ASSESSMENT	r:															
CI			ITY	R	EDU	INDA	NC	Y:	SCRE	ENS	3			CIL	ſ	
		JIGH V/FUI	NC I	A				В			С				-	
NASA IOA	[[3	/ /2R]	[[P]]	P]	[P]		[]	*
COMPARE	[и	/N]	[N]		[N	1	[N]		[]	
RECOMMEND	ATI	ons:	(If	dif	feı	rent	: :	fro	om NA	SA)					
	[/	1	[)		[]	[]	(A)	[ID/DD		TE)
* CIL RET	ENT	ION	RATION	ALE:	(If a	(p	pl:	icabl	e) Il	A A	DEQUA	ATE ATE	[]	
REMARKS: OXIDIZER BY IOA.	AND SEE	FUE ASS	L TANK ESSMEN	ISC T II)LA')s .	TION	1 '	VA:	LVE 1 081X-	/2	S1 08	WITC	HES :	RE-Al	IAN	LYZED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1748		ASA DATA: BASELINE NEW	[]	
MDAC ID:	ARCS 1748 L/R OX & FU TK IS	OL VLV 1/2	SWITCH		
LEAD ANALYST:					
ASSESSMENT:					
CRITICALI FLIGHT	<u>. </u>	Y SCREENS		CIL ITEM	
HDW/FU	IC A	В С			
NASA [/ IOA [3 /1R] [] [] [P] [] [P] [P]	[]	*
COMPARE [N /N] [N][n] [n]	[]	
RECOMMENDATIONS:	(If different f	rom NASA)			
[/] [] [] [] (AD	[]	
* CIL RETENTION I	RATIONALE: (If app		DEQUATE DEQUATE	[]	
	L TANK ISOLATION V ESSMENT IDS ARCS 1			E-ANA	LYZEC

ASSESSME	A.T. D	ATE:							NASA DA	IA:		
ASSESSMEN NASA FME		D:	ARCS-	L749					BASELI:	NE [EW []	
SUBSYSTEM MDAC ID: ITEM:			1749	< &	FU T	K ISC	L VI	.V 1/	2 SWITC	Н		
LEAD ANAI	LYST	:										
ASSESSMEN	NT:											
C	F	LIGH:								CII		
	HD	W/FUI	NC	A		E	1		С			
NASA IOA	[3	/ /1R]	[[P]	[[F]	[] P]	[[] *	•
COMPARE	[N	/N	1	[N]	[N	3	[и ј	[}	
RECOMMENI	DATI	ons:	(If	dif	fere	nt fr	om N	(ASA)				
	[/]	[]	[]	[]	[(ADD/I] DELET	ĽE)
* CIL RET	nestm	TON 1	D A TO TO A TO	\T E.	/T#	annl	iash	101				
	LENI	ION	RATION	TIE:	(11	appı	ICab		ADEQUAT:	E []	
REMARKS: OXIDIZER	AMD	ושונט	r ጥአእፕሆ	TCA	TAMT	ON 178	T 17E	1 /2	CMITTOUT	ג_סם פ	MATU	7757
BY IOA.										S RE-F	MWDI	∠ EL

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1750			NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM: 1, 2	ARCS 1750 L/R OX & I	FU TK IS	OL ATA	1/2 SWITCH C	PEN CONTACTS
LEAD ANALYST:					
ASSESSMENT:				anc	CIL
CRITICAL	JTY R	EDUNDAN	CY SCREI	ENS	ITEM
FLIGH HDW/FU			В	С	
NASA [/ IOA [3 /2]] [R] [F) [F]	[[x] *
COMPARE [N /N	_ •		и]	[и]	[и]
RECOMMENDATIONS	: (If di	fferent	from NA	SA)	
[/) [1	[]	[] ADD/DELETE)
* CIL RETENTION	RATIONALE	: (If ag	plicabl	le) ADEQUATE INADEQUATE	[]
REMARKS: OXIDIZER AND FU BY IOA. SEE AS	JEL TANK IS SSESSMENT I	OLATION Ds ARCS	VALVE 1 12081X	1/2 SWITCHES -12085X.	RE-ANALYZED

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: 1, 2	EN EA EM :	T #	ID:	1	ARCS- ARCS L751 L/R O				TK]	(SC	DL	VLV 1		NASA BASE	LINE NEW	[•		A OMG
LEAD AN	7. T A	7.91	r.										•			21		0111	ACIS
ASSESSMI			•																
	CR	II F	TICA: FLIGI W/FU	HT			R A		NDAN	CY B		CREEN				CIL ITE			
NASA						r				_			С						
IOA	Ī	3	/21	₹j		[P]	[P]]	P]		[]	*	
COMPARE	[N	/N]]	N]	[N]	ſ	N]		[]		
RECOMMEN	DA!	ri(ons:		(If o	li	ff	ere	ent f	fro	om	NASA)							
	[/]]	ſ)	[]	(ADI	[D/DE	LE'	TE)	
* CIL RE	ren	T)	ION :	RAI	'IONAI	E	:	(If	app	li	.ca								
REMARKS:												IN	AD	EQUAT EQUAT	E i	•]		
OXIDIZER BY IOA.	AN SE	D E	FUE:	L T ESS	ANK I MENT	S	OL Os	ATI AR	ON V	AL 20	VE 812	1/2 K-120	SW. 85:	ITCHE	S RE	-ANZ	AL 3	ZEI)

ASSESSME ASSESSME NASA FME	ENT I	D:	ARCS-	1752	2			1	NASA DAT BASELIN NE]	
SUBSYSTE MDAC ID: ITEM: 3, 4			ARCS 1752 L/R O	X &	FU TI	K ISO	or Ai	V 1/:	2 SWITCH	GPC	CONTAC	CTS
LEAD ANA	LYST	:										
ASSESSME	NT:											
		ICAL LIGH	ITY	R	EDUNI	DANCY	SCR	EENS		CI		
		W/FU		A	2	IT	SM					
NASA IOA	[3	/3]	[]	[]	[]]] *]	
COMPARE	[N	/N]	[J	[]	[]	[]	
RECOMMEN	DATI	ons:	(If	dif	feren	nt fr	om N	ASA)				
	[/]	[]	[]	[] (2	[ADD/I] ELETE)	
* CIL RE	TENT	ION I	RATION	ALE:	(If	appl	icab	A	DEQUATE]	
REMARKS: OXIDIZER BY IOA.	AND SEE	FUEI ASSE	L TANK ESSMEN	ISO	LATIO	N VA	LVE :	1/2 S	WITCHES	RE-A	NALYZE	D:

ASSESSMEN ASSESSMEN NASA FME	TN	IL		ARC	cs-1753					ASA I BASEI		-]	
SUBSYSTEMDAC ID: ITEM: 3, 4	M:			ARC 175 L/F		TU T	K ISO	L VI	V 1/2	SWIT	гсн с	BPC	CONT	r act s
LEAD ANA	LYS	ST:	}											
ASSESSME	NT:	:												
	CR:			ITY	RI	SCR	EENS			CI				
	1		LIGH V/FU	_	A	В		c	:		-	J1-1		
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COMPARE	[N	/N]	[1	[]	[)		[3	
RECOMMEN	DA'	TI	ons:		(If dif	fere	nt fr	om N	IASA)					
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* CIL RE	ETE	NT	ION	RAT	IONALE:	(If	appl	icak	7	ADEQU ADEQU]	
REMARKS: OXIDIZER	R S	ND	FUE	EL T. SESS	ANK ISO	LATI s AR	ON VA	LVE 081)	1/2 S	SWITC	HES	RE-	ANAL	YZED

ASSESSME ASSESSME NASA FME	NT I		ARCS-	175	4							ASA DAT BASELIN NI]	
SUBSYSTEMDAC ID: ITEM: CONTACTS			ARCS 1754 L/R O	Κ &	F	U TK	IS	501	r Ara	1,	/2	SWITCH	i CL	OSE		
LEAD ANA	LYST	:														
ASSESSME	NT:															
•	F	LIGH	-			DUNDA	NC		SCRE	EN				IL FEM		
	HD	W/FUI	NC		A			В			С					
NASA IOA	[3	/ /2R]	[P]]	P]	[[P]] []	*	
COMPARE	[N	/N]	[N]	[N]	[N	3	[]		
RECOMMENI	DATI	ons:	(If	di	ff	erent	f	rc	om NA	SA)					
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DEMADEC.										Iì	AL AL	DEQUATE DEQUATE]	ı	
REMARKS: OXIDIZER BY IOA.	AND SEE	FUE!	L TANK ESSMENT	IS 'I	OL Ds	ATION ARCS	V 1	'AL .20	VE 1, 81X-	/2 12(SW 285	VITCHES	RE-	-ANA	LYZE	:D

ASSESSMENT ASSESSMENT NASA FMEA	ID		ARCS-1	75	5							SA DATA ASELINE NEW		;]	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 5			ARCS 1755 L/R OX	. &	· F	т тк	IS	SOI	, ATA	1/	2	SWITCH	CLO	SE		
LEAD ANALYS	ST:															
ASSESSMENT	:															
CR:		CAL	[TY		RE	DUNDA	NC	CY	SCREE	ENS			CI	_		
1			NC		A			В			С					
NASA [IOA [3	/ /1R]]	P]]	F]	[P]	[X] *	
COMPARE [N	/N]	[N	1	[N]	[N]	[N]	
RECOMMENDA	TIC	ons:	(If	đi	iff	ferent	t 1	fro	om NAS	5 A)						
(/]	[]	[]	[]	[ADD/	DE] LET	E)
* CIL RETE	NT]	ON I	RATIONA	LI	€:	(If	apj	p1 :	icable		Al	DEQUATE	[]	
REMARKS:										IN	IAI	DEQUATE	[]	
OXIDIZER A	ND EE	FUE:	L TANK ESSMENT	IS C I	501 [Ds	LATIO	N Y	VA: 12	LVE 1, 081X-:	/2 120	81 18	WITCHES	RE-	AN	ALY	ZED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #: SUBSYSTEM: MDAC ID: ITEM:	ARCS-175 ARCS 1756 L/R OX		SOL VLV	NASA DATA: BASELINE NEW 1/2 SWITCH (
7, 8					
LEAD ANALYST:					
ASSESSMENT:			NCY SCRE	ENS	CIL
CRITICA FLIG				C	ITEM
HDW/F		A	В	_	r] *
NASA [/ IOA [3 /1] [R] [[] [P]	[P]	[] [P]	[] *
COMPARE [N /N		[N]	[и]	[N]	[]
RECOMMENDATIONS	s: (If	different	from N	ASA)	
RECOMMENDATE /		[]		r 1	[] ADD/DELETE)
* CIL RETENTIO				INADEQUATE	. []
REMARKS: OXIDIZER AND F BY IOA. SEE A	UEL TANK SSESSMENT	ISOLATIO I IDs ARC	N VALVE S 12081	1/2 SWITCHES (-12085X.	RE-ANALYZED

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: 7, 8	IEN IEA 'EM:	T :	ID:	A A	RCS-1 RCS 757 /R OX				тĸ	I	so)L	VLV 1		BA		E []] COM	NTACT	:s
LEAD AN	ALY	S1																			
ASSESSMI	ENT	·																			
		F	'ICAL 'LIGH W/FU	T	?				INDA	NC	CY B		CREEN	s c			CI IT	_			
NASA IOA					[•	P]	1	[P]	[P]]]	*		
COMPARE	[N	/N]	[1	N	J	[•	N]	ι	N]		[]			
RECOMMEN	DAT	CIC	ONS:		(If d	ii	ff	er	ent	f	ro	m	NASA)								
	[/]	[]	[]	ε]	(A	[DD/D		ETE	Ε)	
* CIL RE	ren	ΤI	ON R	AT)	ONAL	E :		(I1	ap	p]	li	ca								•	
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1758			NASA DAT BASELII NI]
DODDIDI	ARCS 1758 L/R OX & F	U TK ISO	r ara	1/2 SWITC	H GPC	CONTACTS
LEAD ANALYST:						
ASSESSMENT:						
CRITICAL		DUNDANCY	SCREE	ns	CII ITE	
FLIGH HDW/FU	NC A	E	3	С		
NASA [/ IOA [3 /3] [] []	[]	[] *
COMPARE [N /N] [] []	[]	Ĩ.]
RECOMMENDATIONS:	(If dif	ferent fi	com NAS	SA)		
[/] [] [1	[]	[(ADD/1] DELETE)
* CIL RETENTION	RATIONALE:	(If app	licable	e) ADEQUAT	E []
REMARKS: OXIDIZER AND FUE BY IOA. SEE ASS	EL TANK ISO SESSMENT ID	LATION V. s ARCS 1	ALVE 1, 2081X-1	/2 SWITCHE 12085X.	ES RE-	ANALYZED

ASSESSMI ASSESSMI NASA FMI	ENT	·I			5-175	9				NASA DA BASELI N			
SUBSYSTIMDAC ID: ITEM: 9, 10				ARCS 1759 L/R	•	FU 1	rk is	OL VI	LV 1/	2 SWITC	H GPC	CONTAC	TS
LEAD AND	Y LY	ST	:										
ASSESSMI	ENT	:											
	CR		ICA: LIGI	LITY	1	REDUN	IDANC:	Y SCR	REENS		CI		
	3		W/F		1	A	1	В	(С	IT	EM	
NASA IOA	[[3	/ /3]	[]]]	[]	[] *	
COMPARE	[N	/N]	[]	[]	[J	[]	
RECOMMEN	DA.	ric	ONS:	: (I	f dif	fere	nt fr	om N	ASA)				
	[/]	[]	[]	[] ([ADD/I] ELETE)	
* CIL RE	TEI	(TV	ON	RATIO	NALE:	(If	appl	icab					
REMARKS:									INA	ADEQUATE ADEQUATE	j]	
OXIDIZER BY IOA.	AN SE	ID EE	FUE	L TAN	K ISO	LATI	ON VA	LVE	1/2 5	WITCHES	RE-A	NALYZEI	D

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #: SUBSYSTEM: MDAC ID: ITEM: CONTACTS 11, 12	ARCS-1760 ARCS 1760 L/R OX &		SOL VLV	NASA DATA: BASELINE NEW 1/2 SWITCH C	[]	
LEAD ANALYST:						
ASSESSMENT: CRITICA	LITY 1	REDUNDAN	CY SCRE	ens	CIL ITEM	
FLIG HDW/F	HT	A	В	С		ı.
NASA [/ IOA [3 /2] [R] [] [P] [[] P]		[]	*
COMPARE [N /N] [и]	[и]	[и]	į j	
RECOMMENDATIONS	: (If di	ifferent	from NA	ASA)		
[/	_	1	[]	[]	ADD/DEL	ETE)
* CIL RETENTIO	V			INADEQUATE	[.	<u> </u>
REMARKS: OXIDIZER AND F BY IOA. SEE A	UEL TANK I SSESSMENT	SOLATION	N VALVE S 12081X	1/2 SWITCHES -12085X.	RE-AN	ALYZED

ASSESSI ASSESSI NASA FI SUBSYST MDAC II ITEM: CONTACT	MENT MEA TEM: TEM:	#: 1,	D: 12	ARCS ARCS 1761				TK	1	sc	L V	LV	1/	BAS		A: E [I [CLOSE	•
			i														
ASSESSM	ENT	:															
	CR		CAL]	[TY		R	EDU	ND	LNC	CY	SC	REEN	ıs			CIL	
	F		/FUN			A				В			c			ITEM	
NASA IOA]	з ́,	/ /1R]	[P]]	F]]	P]		[x]	*
COMPARE			/N]	[N]		[N]	ι	N	_		[N]	
RECOMMEN	DAT	ION	is:	(If	di:	fí	fere	nt	f	ro	m N	IASA)				
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* CIL RE	ren:	rio	N RA	ATIONA	LE:	;	(If	aŗ	p]	lio	cab	le)			,	-, -,	215)
REMARKS: OXIDIZER BY IOA.	AND	। । व	liet.	M 3 3772		_						IN	AD	EQUA EQUA ITCH X.	ה שת] -ANAI	LYZED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1762		DATA: ELINE [] NEW []
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1762 L/R OX & FU TR	K ISOL VLV 3/4/5	A OR B SWITCH
LEAD ANALYST:			
ASSESSMENT:			
CRITICAL FLIGH	ITY REDUND	DANCY SCREENS	CIL ITEM
HDW/FU		В С	IILM
NASA [/ IOA [3 /1R] [] [P]	[] [] [P]	[] *
COMPARE [N /N] [N]	[N] [N]	[]
RECOMMENDATIONS:	(If differen	it from NASA)	
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* CIL RETENTION REMARKS:	RATIONALE: (If	ADEQU	JATE [] JATE []
	L TANK ISOLATIO	N VALVE 3/4/5 SWI	TCHES RE-ANALYZED

BY IOA. SEE ASSESSMENT IDS ARCS 12102X-12106X.

ASSESSME ASSESSME NASA FME	ENT I	D:	ARCS-1	.763	3				BASEI		-]	
SUBSYSTE MDAC ID: ITEM:			ARCS 1763 L/R 02	. & .	FU I	rk Isol	. VI	LV 3/4	/5 A	OR B	SW:	ІТСН	
LEAD ANA	LYSI	r:											
ASSESSME	ENT:												
		rical Fligh	ITY	1	REDUN	IDANCY	SCF	REENS			CIL		
				1	A	В		c					
NASA IOA	[3	/ 3 /2R]	[]	P]	[[P]	[[P]		[] *	
COMPARE	[]	и /и]	[]	N]	[N]	[N]		[]	
RECOMMEN	NDAT	ions:	(If	di :	ffere	ent fro	om 1	NASA)					
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REMARKS: OXIDIZEI BY IOA.	R AN	D FUE E ASS	L TANK ESSMEN'	IS T I	OLATI Ds Al	ION VA	LVE 1023	3/4/5	SWI			_	LYZED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1764	ľ	IASA DATA: BASELINE NEW	[]
	ARCS 1764 L/R OX & FU TH	K ISOL VLV 3/4	1/5 A OR B	SWITCH
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL FLIGH	- -	DANCY SCREENS		CIL ITEM
HDW/FU	_	В	С	
NASA [/ IOA [3 /1F] []	[] [[P]] P]	[] *
COMPARE [N /N] [N]	[и]	N]	[]
RECOMMENDATIONS:	(If differe	nt from NASA)		
[/] []	[] [] (AD	[] D/DELETE)
* CIL RETENTION	RATIONALE: (If		ADEQUATE ADEQUATE	[]
REMARKS: OXIDIZER AND FUL BY IOA. SEE ASS	EL TANK ISOLATI SESSMENT IDS AF	ON VALVE 3/4/ RCS 12102X-121	5 SWITCHES	S RE-ANALYZED

ASSESSM ASSESSM NASA FM	ENT ID:		-1765		NASA BASE	DATA: LINE [] NEW []
SUBSYST MDAC ID ITEM: CONTACT	:	ARCS 1765 L/R		rk isol v	LV 3/4/5 A	OR B SWITCH OPEN
LEAD AN	ALYST:					
ASSESSM	ENT:					
	CRITIC	ALITY GHT	REDUN	DANCY SCI	REENS	CIL
		FUNC	A	В	С	ITEM
NASA IOA	[3 /] 1R]	[] [P]	[] [F]	[] [P]	[] * [X]
COMPARE	[N /	ו א	[N]	[N]	[и]	[N]
RECOMMEN	IDATION:	S: (If	differe	nt from N	ASA)	
	[/]	[]	[]	[]	[] (ADD/DELETE)
* CIL RE	TENTION	N RATION	ALE: (If	applicab		
REMARKS:					ADEQUA INADEQUA	TE [j
OXIDIZER BY IOA.	AND FU	JEL TANK SSESSMEN	ISOLATIO T IDS ARC	ON VALVE CS 12102X	3/4/5 SWIT -12106X.	CHES RE-ANALYZED

ASSESSMENT ASSESSMENT NASA FMEA	'ID		ARCS-1	766							SA DAT ASELIN NI]	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1			ARCS 1766 L/R OX	& 1	TU TK	IS	OL	VLV	3/	4/	5 A O	R 18 :	SWI'	гсн	OPEN
LEAD ANALY	YST:														
ASSESSMENT	r:														
CI			ITY	R	EDUNDA	ANC	CY	SCRE	ENS	3			IL TEM		
		JIGH I/FU		A			В			С					
NASA IOA	[3	/ /2R]	[[P]	[P]	[[P]	[] *	
COMPARE	[N	/N]	[]]	[N]	[N]	[]	
RECOMMEND	ATIC	ons:	(If	dif	feren	t:	fr	om NA	SA)					
]	/	1	[3	[]	[]	(ADI) D/DE		E)
* CIL RET	ENT	ION	RATION	ALE:	(If	ap	pl	icabl			DEQUA'I DEQUA'I		[]	
REMARKS: OXIDIZER BY IOA.		FUI ASS	EL TANK SESSMEN	ISC T II	LATIO S ARC	N S	VA 12	LVE 3	3/4 -12	/5 10	SWITO	CHES	RE-	-AN?	ALYZED

ASSESSMI NASA FMI	ENT	[י	D:	•	CS-176	5 7				NASA BAS	DATA ELINE NEW] :		
SUBSYSTI MDAC ID: ITEM: CONTACTS	:			AR(17(L/1	67	FU '	TK IS	OL V	LV 3/	4/5 1	A OR	Вε	SWITCH	GPC
LEAD ANA	LY	SI	!:											
ASSESSME	ENT	:												
	CR		'ICAI 'LIGH	LITY]	REDUI	NDANC:	Y SCE	REENS			CI	_	
	;	HD	W/Ft	INC	1	Ą	.]	В		С		TT	EM	
NASA IOA	[3	/3]]]	[[]	[]		[] *]	
COMPARE	[N	/N]	[3	[]	[]		[]	
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REMARKS:									INA	DEQUA	ATE	-]	
OXIDIZER BY IOA.	AN SE	D E	FUE:	L TAI ESSMI	NK ISO ENT ID	LATIO	ON VA	LVE :	3/4/5	SWIT	CHES	RE	-ANALY	ZED

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1768					SA DATA: ASELINE NEW]]
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 3, 4	ARCS 1768 L/R OX & F	U TK	ISOL	ATA	3/4/	5 A OR B	SWI	rch GPC
LEAD ANALYST:								
ASSESSMENT:	Di	EDUNDA	NCV	SCREE	:NS		CIL	
CRITICAI FLIG		FDONDA		DOM	С		ITEM	
HDW/FC			В		C		_	1 *
NASA [/ IOA [3 /3] [] []	[]	[]	[] *
COMPARE [N /N	_	1	[1	[1	[]
RECOMMENDATIONS	: (If dif	feren	t fr	om NA	SA)			
[/]	[]	[] (A	DD/D] ELETE)
* CIL RETENTION	RATIONALE:	: (If	appl	icabl	e) A INA	DEQUATE	[]
REMARKS: OXIDIZER AND FU BY IOA. SEE AS	JEL TANK ISC SSESSMENT I	OLATIC Ds ARC	N VA	ALVE 3 2102X-	3/4/5 -1210	SWITCHI	es re	-ANALYZED

ASSESSI ASSESSI NASA FI SUBSYST MDAC ID ITEM: CLOSE C	MEN' MEA MEM :	T #	ID:		ARCS 1769			TK]	[SC	OL V	LV 3	BAS] ¥	,	
LEAD AN	ALY	S]	::													
ASSESSM	ENT	!:														
		F	'ICAI 'LIGH	ΙT		R	EDU	NDAN	CY	sci	REENS	5		CI	C.	
		HD	W/FU	JNC	2	A			В			С		ITI	EM	
NASA IOA	[3	/ /2R]	[[P]	[P]]] P]		[]	*
COMPARE	[N	/N]	[N]	[N]	[И ј		[)	
RECOMMEN	DA'I	ľI	ons:		(If d	ifi	fere	ent 1	rc	m N	ASA)					
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REMARKS:											INA	ADEQUA ADEQUA	ATE	[]	
OXIDIZER BY IOA.	AN SE	D E	FUEL ASSE	. I	'ANK IS MENT I	OL Ds	ATI AR	ON V	AL 21	VE 3	3/4/5 -1210	S SWIT	CHES	RE-	AN/	ALYZED

ASSESSMENT DA ASSESSMENT ID NASA FMEA #:)	NASA DA BASELI 1	ATA: INE [] VEW []
SUBSYSTEM: MDAC ID: ITEM: CLOSE CONTACTS	1770 L/R OX &	FU TK ISOL V	LV 3/4/5 A C	DR B SWITCH
LEAD ANALYST:				
ASSESSMENT:				
CRITIC FL	CALITY F	REDUNDANCY SC	REENS	CIL ITEM
	/FUNC A	В	С	IIBM
NASA [/	/] [/2R] [F	[] [F]	[] [P]	[] * [X]
COMPARE [N /	/N] [N	[и]	[N]	[N]
RECOMMENDATION	NS: (If dif	ferent from]	NASA)	
[/	'] [] []	[]	[] (ADD/DELETE)
* CIL RETENTION	ON RATIONALE:	(If applical	ole) ADEQUAT INADEQUAT	E [] E []
	TUEL TANK ISO ASSESSMENT ID	LATION VALVE s ARCS 12102)	3/4/5 SWITC -12106X.	HES RE-ANALYZED

ASSESSMI ASSESSMI NASA FMI	ENT ID:		ARC	CS-1	.77	1								LINE NEW	[
SUBSYSTI MDAC ID ITEM:			ARC 177 L/F	71	ς ε	F	ט כ	ROSS	FI	EED	ATA	1/	'2 ST	VITCH	I			
LEAD AN	ALYST:																	
ASSESSM	ENT:																	
	CRITIC FL:	CALI				RE	DUN	DANC	CY	SC	REENS				CII			
	HDW,	/FUì	1C			A			В			С						
NASA IOA	[3 ,	/ /1R]		[P]]	P]] [P]		[]	*	
COMPARE	[N ,	/N]		ĺ	N]	[N]	(N]		[]		
RECOMME	NDATIO	NS:		(If	đ	Ĺfí	ere	nt 1	fr	om	nasa))						
	[,	/]	-	[]	[]	[]	(A)] DELE	TE)	
* CIL R		ON 1	RAT:	ION	ALI	€:	(If	app	pl	ica		A IAN	DEQU.	ATE ATE	[]		
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ANALYZE	D BY I	OA.	S	EE A	ASS	SES	SSME	ITT	ID	s A	RCS	12:	125X	-121	29X.	•		

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1772	NA: Bi	SA DATA: ASELINE [NEW []
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1772 L/R OX & FU CF	COSSFEED VLV 1/	2 SWITCH	
LEAD ANALYST:				
ASSESSMENT:		COPERNS	CII	
CRITICAL	U	DANCY SCREENS	ITE	EM
FLIGH HDW/FU		ВС		
NASA [/ IOA [3 /1	- r 1	[] [[P] [P] [] *
COMPARE [N /N		[и] [и] []
RECOMMENDATIONS	: (If differe	ent from NASA)		
RECOMPENDATIONS		[] [] [(ADD/] DELETE)
* CIL RETENTION	N RATIONALE: (I:	f applicable) , INZ	DEQUATE [DEQUATE []
REMARKS: LEFT AND RIGHT ANALYZED BY 10	OXIDIZER AND F A. SEE ASSESSM	UEL CROSSFEED VENT IDS ARCS 1	/ALVE 1/2 SV 2125X-12129	NITCHES RE- X.

ASSESSI ASSESSI NASA FM	MENT DATE: MENT ID: MEA #:	ARCS-1773		NASA D BASEL	INE []
SUBSYST MDAC ID ITEM:	'EM:	ARCS 1773 L/R OX & FU	CROSSFEED	VLV 1/2 SWI	NEW [j
LEAD AN	ALYST:			1/2 SW	rich
ASSESSM	ENT:				
	CRITICALI FLIGHT		UNDANCY SCI	REENS	CIL
	HDW/FUN	C A	В	С	ITEM
	[3 /1R] [p]	[] [P]	[] [P]	[] *
COMPARE	, , , ,] [N]	[N]	[N]	[]
RECOMMEN	DATIONS:	(If differ	ent from N	ASA)	
	[/]	[]	[]	[]	[] ADD/DELETE)
* CIL RE	TENTION RA	TIONALE: (I	f applicabl	le)	,,
REMARKS:				ADEQUATE INADEQUATE	į į
ANALYZED	BY IOA.	DIZER AND FU SEE ASSESSMI	JEL CROSSFE ENT IDS ARC	ED VALVE 1/3 S 12125X-12	SWITCHES RE-

ASSESSMEN	SSESSMENT DATE: SSESSMENT ID: ARCS-1774 ASA FMEA #:									DATA ELINE NEW]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS			ARCS 1774 L/R O	K &	FU (CROSSF	EED	VLV	1/2	SWITC	н ор	EN	
LEAD ANA	LYST	:											
ASSESSMEN	T:												
C	F	LIGH				IDANCY					CIL		
	HD	/FUI	NC	I	A.	В			С				
NASA IOA	[3	/ /2R]	[]] P]	[[P]] [p]		[] *	
COMPARE	[N	/N]	[]	N]	[N]	[n j		[1	
RECOMMENI	OATIO	ONS:	(If	di:	ffere	ent fr	om 1	NASA)					
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ANALYZED										•		1 011110	-/-

ASSESSME ASSESSME NASA FME	NT I	D:	ARCS-	-1775	5			1	NASA DA BASELI N]	
SUBSYSTE MDAC ID: ITEM: CONTACTS		2	ARCS 1775 L/R	ox &	FU C	ROSSI	FEED	VLV :	1/2 SWI	TCH O	PEN	
LEAD ANA	LYSI	:										
ASSESSME	NT:											
		'ICAL 'LIGH		F	REDUN	DANCY	SCR	EENS		CII		
		W/FU		P	4	F	3	•	С	111	214	
NASA IOA	[3	/ /3]	[[]	[[]]	[[]	[] *]	
COMPARE	[N	I /N]	[]	[]	[]	[]	
RECOMMEN	DATI	ons:	(Ii	f dif	fere	nt fr	om N	ASA)				
	[/	3	(]	[]	[]	[(ADD/I] DELETE	2)
* CIL RE	TENT	'ION	RATION	IALE:	(If	appl	.icab	1	ADEQUAT ADEQUAT	-]	
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ASSESSMEN NASA FMEA	T	I		ARCS	5-1776				r	NASA D BASEL		[]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS				1776		FU C	ROSSI	FEED	VLV 1	L/2 SW	ITCI	i GI	PC .	
LEAD ANAI	LYS	T:	:											
ASSESSMEN	T:													
C	CRI				R	EDUN	DANCY	SCR	EENS			CII		
	H		LIGH //FU		A		F	3	C	2		111	21-1	
NASA IOA	[3	/3]	[]	[]	[]		[] *	
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMMENI	ľAC	CIC	ons:	(3	f dif	fere	nt fi	com N	ASA)					
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REMARKS: LEFT AND ANALYZED	RI By	[GI	T C	XIDI2 SEI	ZER AN E ASSE	D FU SSME	EL CE	ROSSF Os AR	EED V	VALVE 2125X-	1/2 121:	SWI 29X	TCHES	RE-

ASSESSM ASSESSM NASA FM	ENT	I		ARCS	5-1777	7			N	NASA DA BASELI N]	
SUBSYST: MDAC ID ITEM: CONTACT:	:	,		ARCS 1777 L/R	,	FU C	ROSSF	EED	VLV 1	./2 SWI	TCH GI	PC	
LEAD AN	ALY	ST	:										
ASSESSM	ENT	:											
		F	ICAL LIGH W/FU		F A		DANCY		REENS	1	CII		
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IOA	[3	/3	j	Ī	j	į	j	[j	[j	
COMPARE	[N	/N]	[]	[]	[]	[]	
RECOMME	'ADA	ΓI	ons:	(1	f dif	fere	nt fr	om 1	NASA)				
	[/]	[]	[]	[]	[(ADD/D] ELETE)	
* CIL RI		NT:	ION I	RATIC	NALE:	(If	appl	ical	A	DEQUAT	•]	

LEFT AND RIGHT OXIDIZER AND FUEL CROSSFEED VALVE 1/2 SWITCHES RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12125X-12129X.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1778	3		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 5, 6	ARCS 1778 L/R OX &	FU CRO	SSFEED VLV	/ 1/2 SWITCH	CLOSE
LEAD ANALYST:					
ASSESSMENT: CRITICAL	J	REDUNDA	NCY SCREE	ns	CIL ITEM
FLIGI HDW/F		A	В	С	
NASA [/ IOA [3 /2] [R] [p]	[] [P]	[] [P]	[] *
COMPARE [N /N	_	и]	[N]	[и]	[]
RECOMMENDATIONS	: (If d:	ifferen	t from NAS	SA)	
[/	_]		r 1	[] ADD/DELETE)
* CIL RETENTION	7 RATIONAL	E: (If	applicabl	e) ADEQUATE INADEQUATE	[]
REMARKS: LEFT AND RIGHT ANALYZED BY IO	OXIDIZER A. SEE AS	AND FUE	EL CROSSFE NT IDS ARC	ED VALVE 1/ S 12125X-12	2 SWITCHES RE- 129X.

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SUBSYST MDAC ID ITEM: CONTACT):				ARCS 1779 L/R (ЭX	&	FU	CRO	SS	FEE	D VL	v :	1/2 S		•	_	
LEAD AN	AL	(S	r:															
ASSESSM	ENI	?:																
	CR		'ICA 'LIGI				R	EDU	NDAN	CY	sc	REE	NS			CI	L	
		HD	W/F	JNC	:		A			В	ı		С	!		IT	em	
NASA IOA	[3	/ /1F] ?]		[P]]	P]	[P]		[]	*
COMPARE	[N	/N]					[N	-		[]	
RECOMMEN	DAT	CIO	ONS:		(If	di	.f1	fere	ent i	fro	om 1	NASA)					
	[/]		[]	[]	[]	(AD	[D/D:] ELE:	re)
* CIL RE	ren	TI	ON 1	RAI	ANOI	LE	:	(If	app	li	cab	le)				•		,
REMARKS:	D.T.	~**	.									IN	IAD	EQUAT	Tr.	[[]	
LEFT AND ANALYZED	BY	GH I	OA.	S	IZER EE AS	AI SSI	ND Es:	FU: SME	EL C	RO: Ds	SSF: AR	EED CS 1	VA 21	LVE 1 25X-1	/2 S 2129	SWIT	'CHE	S RE-

ASSESSMENT ASSESSMENT NASA FMEA #	ID: ARCS-	·1780		NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 7,	1780 L/R O	X & FU CI	ROSSFEED V	LV 1/2 SWITC	H OPEN
LEAD ANALYS	r:				
ASSESSMENT:					
1	FICALITY FLIGHT DW/FUNC	REDUNI A	DANCY SCRE	ENS C	CIL ITEM
•••	J., 1 J., 0		В	C	
NASA [IOA [/] 3 /1R]	[] [P]	[] [P]	[] [P]	[] *
COMPARE [1	и /и ј	[и]	[N]	[N]	[נ
RECOMMENDAT	IONS: (If	differer	nt from NA	SA)	
ί	/]	[]	[]	[·]	[] DD/DELETE)
+ 077 DDMD17					•
* CIL RETENT REMARKS:	TION RATION	ALE: (If	applicable	e) ADEQUATE INADEQUATE	
LEFT AND RIG	HT OXIDIZE	R AND FUE	L CROSSFE	ED VALVE 1/2	SWITCHES RE-
ANALYZED BY	IOA. SEE	ASSESSMEN	T IDS ARC	S 12125X-121	29X.

ARCS-1781		NASA DATA: BASELINE NEW	[]
ARCS 1781 L/R OX & E	TU CROSSFEED VI	LV 1/2 SWITC	H OPEN
T T			CIL ITEM
NC A	В	С	
] [] [P] []] [F]	[] [P]	[x] *
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(If dif	ferent from NAS	SA)	
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RATIONALE:	(If applicable	e) ADEQUATE INADEQUATE	[]
	ARCS 1781 L/R OX & F ITY RET NC A] [P] [N (If diff	ARCS 1781 L/R OX & FU CROSSFEED VI ITY REDUNDANCY SCREIT NC A B] [] []] [P] [F]] [N] [N] (If different from NAS	ARCS-1781 BASELINE NEW ARCS 1781 L/R OX & FU CROSSFEED VLV 1/2 SWITCH ITY REDUNDANCY SCREENS T NC A B C [] [] [] []] [P] [F] [P]] [N] [N] [N] (If different from NASA)] [] [] [] [ADEQUATE

REMARKS:

LEFT AND RIGHT OXIDIZER AND FUEL CROSSFEED VALVE 1/2 SWITCHES RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12125X-12129X.

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SUBSYSTER MDAC ID: ITEM: CONTACTS		1		ARCS 1782 L/R OX	: & F	U CRO	SSFE	ED VL	V 1/	2 SWITC	H GPC	:	
LEAD ANA	LYS?	T:											
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL													
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HDW/FUNC A B C													
NASA IOA	[] *											
COMPARE	[N	/N]	[]	ſ]	[3	[]	
RECOMMEN	DAT	'IC	ons:	(If	dif	feren	t fr	om NAS	SA)				
	[/]	[1	[1	[] (2] ELETE)	
* CIL RI	ETEN	1 T:	ION	RATION	ALE:	(If	appl	icabl	A	DEQUATE DEQUATE]	
REMARKS: LEFT ANI ANALYZEI		IG:	HT C	XIDIZE SEE	R AN ASSE	D FUE SSMEN	L CR T II	OSSFE S ARC	ED V S 12	ALVE 1/ 125X-12	2 SWI 129X.	TCHES RE-	

ASSESSM ASSESSM NASA FM SUBSYST: MDAC ID ITEM: CONTACT: LEAD AND	ENT EA EM: : S 9	#: *	10:	ARCS ARCS 1783			ROSS	FEED	VLV	NASA DA BASELI N 1/2 SWI	NE [,		
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL FLIGHT HDW/FUNC A B C														
			С	ITH	EM									
NASA IOA	[]	[] *										
COMPARE	[N	/N]	[]	[]	[1	ι]		
RECOMMEN	DA:	ri	ons:	(If	dif	fere	nt fr	om N	ASA)			-		
	[/	-]			[[ADD/D		E)	
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REMARKS:									INA	DEQUATE DEQUATE	į]		
LEFT AND ANALYZED	RI BY	GH	T OX	SEE .	R AN	D FUE SSMEN	L CR	OSSF1 s ARG	EED V CS 12	ALVE 1/ 125X-12	2 SWI:	TCHES	RE-	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1784		NASA DATA: BASELINE NEW										
30001012111	ARCS 1784 L/R OX & F	U CROSSFEED VLV	7 1/2 SWITCH	CLOSE									
LEAD ANALYST:													
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL													
CRITICALITY REDUNDANCE SERVERS ITEM													
FLIGHT HDW/FUNC A B C													
NASA [/ IOA [3 /21] [?] [P] []] [P]	[] [P]	[] *									
COMPARE [N /N] [N] [N]	[и]	[]									
RECOMMENDATIONS	(If diff	ferent from NAS	A)										
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* CIL RETENTION	RATIONALE:	(If applicable) ADEQUATE INADEQUATE										
REMARKS: LEFT AND RIGHT ANALYZED BY IOA	OXIDIZER AN . SEE ASSE	D FUEL CROSSFEE	D VALVE 1/2 12125X-121	SWITCHES RE- 29X.									

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SUBSYSTI MDAC ID: ITEM: CONTACTS	:			ARCS 1785 L/R	;	FU	CROS	SSF	EED'	AFA	1/2	SWIT	сн с	LOSE	
LEAD ANA	YLY	ST	':												
ASSESSME	ENT	:													
		F	LIGH	_		RED	UNDAN	CY	SCI	REEN	S		CI IT		
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RECOMMEN	DAT	ľIO	ons:	(II	f di	ffeı	cent	fro	om N	ASA)					
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REMARKS:							-			IN	ADEQ	UATE UATE	į]	
LEFT AND ANALYZED	RI BY	GH I	T OX	SEE	R AN ASSE	D F	UEL (ENT]	CRO Ds	SSF AR	EED CS 1	VALV 2125	E 1/2 X-121	SWI 29X.	TCHES	RE

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SUBSYSTE MDAC ID:		.		ARCS 1786 MASTER	: F	RCS	CRO	ss	FE]	ED S	WITC	ЭН		•		•	
LEAD ANA	LYS	ST	:														
ASSESSME	NT	:															
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	1		W/FU			A			В			С					
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COMPARE	[N	/N]	[N]	[N]	[N	1	[N]	
RECOMMEN	DA'	TI	ons:	(If	d :	iff	eren	ıt	fr	om N	(ASA))					
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* CIL RE	TE	NT	ION	RATION?	\L	E:	(If	aŗ	pl	icak			DEQUATE DEQUATE]	
REMARKS: MASTER F ASSESSME	RCS		ROSS Ds A	FEED SV	VI'	TCI 7X-	1 36 -1217	RE	:-A	NALY	ZED	B	Y IOA.	SEI	E		

ASSESSM ASSESSM NASA FM	ENT	II		ARCS-	17	87							ASA DA BASELI N		[]	
SUBSYST: MDAC ID ITEM:				ARCS 1787 MASTE	R I	RC	S CR	oss	FE:	ED SW	/IT	СН					
LEAD AN	ALYS	ST:	:														
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1	788		NASA DATA BASELINE NEW	[]									
SUBSYSTEM: MDAC ID: ITEM: FEED FROM LEFT S	ARCS 1788 MASTER WITCH C	RCS CRO	SSFEED SW	ITCH FEED FR	ROM RIGHT OR									
LEAD ANALYST:	ASSESSMENT:													
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL ITEM														
CRITICALITY REDUNDANCY SCREENS CIL ITEM FLIGHT C														
FLIGHT HDW/FUNC A B C														
NASA [/ IOA [3 /1		[] [P]	[] [P]	[] [P]	[] *									
COMPARE [N /N]	[N]	[N]	[N]	[]									
RECOMMENDATIONS	: (If	differe	nt from N	ASA)										
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* CIL RETENTION	RATION	WALE: (Ií	applicab	le) ADEQUATI INADEQUATI										
REMARKS: MASTER RCS CROS ASSESSMENT IDS	SSFEED S ARCS 12	SWITCH 30 2167X-12	S RE-ANALY 171X.	ZED BY IOA.	SEE									

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MDAC I	D:			1789												
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LEAD A	NALY	SI	?:													
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			LIGH						-		.KEEN	3		CI	_	
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REMARKS	:										TN.	AD.	EQUATE	[j	
MASTER 1 ASSESSMI	RCS ENT	CR(OSSF S AR	EED SW CS 121	ITC 67X	H -1:	36 F 2171	ξΕ- <i>)</i> .Χ.	AN.	ALY	ZED :	BY	IOA.	SEE		

ASSESSMENT DA ASSESSMENT ID NASA FMEA #:		-1790		NASA DAT BASELIN NI										
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1790 L/R		ossfeed V	LV 3/4/5 S	WITCH									
LEAD ANALYST:	:													
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL ITEM FLIGHT HDW/FUNC A B C														
FLIGHT HDW/FUNC A B C														
HDW/FUNC A B C NASA [/] [] [] [] * IOA [3 /2R] [P] [P] [P]														
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RECOMMENDATI	ons: (If differer	nt from N	ASA)										
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REMARKS: LEFT AND RIG ANALYZED BY	HT OXIDI	ZER AND FU E ASSESSME	EL CROSSF NT IDS AR	EED VALVE CS 12146X-	3/4/5 SWITCH RE- 12150X.									

ASSESSM ASSESSM NASA FM	EN'	T I	D:	CE:	ARCS	-17	79]	L					ì	NASA D BASEL		[I I	
SUBSYST MDAC ID ITEM:					ARCS 1791 L/R (ОX	&	FU	CROS	SSF	'EED) VI/	73	3/4/5		•	,		
LEAD AN	AL	(SI	?:																
ASSESSM	ENT	r:																	
		F	LI	GHT			R	EDU	JNDAN	CY	SC	REEN	s			CII	_		
		HD	W/	FUN	iC		A			В			С			ITE	M		
NASA IOA	[3	/	1R]	[P]] [P]]	P]		[]	*	
COMPARE	[N	/1	N]	[N]	[N]	[N]		ε]		
RECOMMEN	IDA'	TIC	SNC	3:	(If	đ:	ifi	fer	ent :	fro	om N	VASA))						
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REMARKS:												IN	IAD	EQUAT:	E	-]		
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1792			ASA DATA: BASELINE NEW	[]									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1792 L/R OX & 1	FU CROSSF	EED VLV 3	/4/5 SWI1	CH									
LEAD ANALYST:														
CRITICALITY REDUNDANCY SCREENS CIL														
FLIGHT ITEM HDW/FUNC A B C														
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NASA [/ IOA [3 /1R] [P] [P] [P]	[]	*								
COMPARE [N /N] [N] [N] [N]	[]									
RECOMMENDATIONS:	(If diff	erent fro	om NASA)											
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* CIL RETENTION F	RATIONALE:	(If appli	AI	DEQUATE DEQUATE	[]									
LEFT AND RIGHT OX ANALYZED BY IOA.	CIDIZER AND SEE ASSES	FUEL CROSSMENT IDS	OSSFEED VA	ALVE 3/4/ 146X-1215	5 SWI 0X.	FCH RE-								

ASSESSME ASSESSME NASA FME	NT	II		AR	CS-1	79	3										DATA LINE NEW	[]		
SUBSYSTEM: ARCS MDAC ID: 1793 ITEM: L/R OX & FU CRO CONTACTS 1, 2 LEAD ANALYST:										ss	FE	ΈD	VL	V	3/	'4/5	SWI	тсн	OP:	EN	
LEAD ANA	LY	ST	:																		
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NASA IOA	[3	/ /1R]		[[P]]	P]		[P]		[]	*	
COMPARE	[N	/N]		[N]		[N]		[N]		[]		
RECOMMEN	IDA	TI	ons:		(If	di	Ĺfi	fer	ent	. f	rc	m	NAS	A))						
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* CIL RI	ETE	NT	ION	RAT	'ION <i>A</i>	LI	Ξ:	(I:	fa	pi	1 i	ica	able				ATE ATE	[]		

REMARKS:

LEFT AND RIGHT OXIDIZER AND FUEL CROSSFEED VALVE 3/4/5 SWITCH RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12146X-12150X.

ASSESSME ASSESSME NASA FME	NT I		ARCS-	-1794	ŀ			NASA DATA: BASELINE [] NEW []					
SUBSYSTE MDAC ID: ITEM: CONTACTS			ARCS 1794 L/R (ox &	FU (CROSSF	EED	ATA :	3/4/5 SW:	ІТСН	OPEN		
LEAD ANA	LYST	:											
ASSESSME	NT:												
(F	ICAL LIGH W/FU		F		idancy B	SCF	REENS		CI:			
NASA IOA	[3	/ /2R]	[[E)	[[F]	[[]	?]	[:	x] *		
COMPARE	[N	/N]	[]	1]	[N]	[1	1]	[]	ן א		
RECOMMEN	DATI	ons:	(II	f dif	fere	ent fr	om N	IASA)					
	[/]	[]	[]	[] DELETE	3)	
* CIL RE	TENT	ION 1	RATIO	VALE:	(II)	appl	icab		ADEQUATE ADEQUATE	[]		
REMARKS: LEFT AND												RE-	

ASSESSME ASSESSME NASA FME	NT ID:	: ARCS-	-1795	;			r	BASE		[]	
SUBSYSTE MDAC ID: ITEM: CONTACTS		ARCS 1795 L/R (OX &	FU C	ROSS1	FEED	VLV 3	3/4/5	swii	'CH	GPC	
LEAD ANA	LYST:											
ASSESSME	NT:											
	CRITICA FLIG		F	EDUN	DANC	SCR	EENS			CIL		
		UNC	A		1	3	(2			H	
NASA IOA	[3 /3]	[]	[[]	[]		[] *	
COMPARE	[N /N]	[]	C]	[]		[]	
RECOMMEN	DATIONS	: (I	f dif	fere	nt fi	com N	ASA)					
	[/]	[]	[3	[]	(AD	[DD/D) ELETE)
* CIL RE		RATIO	NALE:	(If	app]	licab		ADEQUA ADEQUA	ATE ATE	[]	
REMARKS:	RIGHT										WITCH	RE-
ANALYZED	BY TOW	. SEE	ASSE	SOME	N.T. TI	JS AK	CS I	446X-	-TZT2	UX.		

ASSESSMEN ASSESSMEN NASA FME	TV	ID	TE:	ARC	s-179	6				ASA DA BASEL]	
SUBSYSTE MDAC ID: ITEM: CONTACTS			ı	ARC 179 L/F	_	FU CI	ROSSF	SWIT	СН	GPC				
LEAD ANA	LYS	ST:												
ASSESSME			[CAI	_ITY		REDUN	DANCY	SCR	EENS			CII		
		F	LIGH W/FU	ΙT		A	E	3	C	2			J	
NASA IOA	[3	/]	[]	[]	[))		[] *]	
COMPARE			/N		C]	[]	ſ	1		[]	
RECOMME	NDA	TI	ons	:	(If d	iffere	ent f	rom N	NASA)					
	[/	1	[1	ĺ]	[3	(A)	[DD/] DELETE	1
* CIL R	ETI	In	NOI	RAT	IANOI	E: (I	f app	lical		ADEQU ADEQU		[]	
REMARKS LEFT AN ANALYZE	: D I	RIC BY	THE	OXII	DIZER SEE AS	AND F	UEL C ENT I	ROSS Ds A	FEED RCS 1	VALVE 2146X	3/4 -121	/5 .50X	SWITCH	RE-

ASSESSM ASSESSM NASA FM		ARCS-1	797			DATA: LINE [] NEW []
SUBSYST MDAC ID ITEM: CONTACT:	:	ARCS 1797 L/R OX	& FU	CROSSFEE) VLV 3/4/5	SWITCH CLOSE
LEAD AND	ALYST:					
ASSESSMI	ENT:					
	CRITICALI FLIGHT		REDU	NDANCY SO	REENS	CIL
	HDW/FUN	C	A	В	С	ITEM
NASA IOA	[/ [3 /2R] [p]	[] [F]	[] [P]	[] * [X]
COMPARE	[N /N] [N j	[N]	[N]	[N]
RECOMMEN	DATIONS:	(If d	iffer	ent from 1	NASA)	
	[/]] []	[]	[]	[] (ADD/DELETE)
* CIL RE	TENTION RA	TIONALI	E: (If	applicab	ole)	
REMARKS:	_				ADEQUAT	re į j
ANALYZED	RIGHT OXI BY IOA.	DIZER A SEE ASS	ND FU	EL CROSSF NT IDS AR	EED VALVE 3 CS 12146X-1	3/4/5 SWITCH RE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1798		BASELINE NEW	
	ARCS 1798 L/R OX & FU CRO	SSFEED VLV	3/4/5 SWIT	TCH CLOSE
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL: FLIGH	ITY REDUNDA F	NCY SCREENS	3	CIL ITEM
	NC A	В	С	
NASA [/ IOA [3 /1R] []] [F]	[] [[F] [P]	[] * [X]
COMPARE [N /N] [N]	[и]	и ј	[N]
RECOMMENDATIONS:	(If different	from NASA)	Į.	
1] []	[] [] (AD	[] DD/DELETE)
* CIL RETENTION I	RATIONALE: (If a		ADEQUATE NADEQUATE	[]
LEFT AND RIGHT OF ANALYZED BY IOA.				

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1799		A DATA: SELINE [] NEW []
MDAC ID:	ARCS 1799 L/R OX & FU C	CROSSFEED VLV 3/4/	'5 SWITCH OPEN
LEAD ANALYST:			
ASSESSMENT:			
CRITICAL: FLIGHT		IDANCY SCREENS	CIL ITEM
HDW/FU	NC A	в с	
NASA [/ IOA [3 /1R] []]	[] [] [P] [P]	[] *
COMPARE [N /N] [и]	[N] [N]	[]
RECOMMENDATIONS:	(If differe	ent from NASA)	
[/] []	[] []	[] (ADD/DELETE)
* CIL RETENTION	RATIONALE: (If	ADEQ	QUATE [] QUATE []
REMARKS: LEFT AND RIGHT OF ANALYZED BY IOA.		JEL CROSSFEED VALV	7E 3/4/5 SWITCH RE-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-180	00	NASA DATA: BASELINE NEW		
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 7, 8	ARCS 1800 L/R OX &	FU CROS	3/4/5 SWIT	CH OPEN	
LEAD ANALYST:					
ASSESSMENT:					CIL
CRITICAL		REDUNDA	NCY SCREE	1 S	ITEM
FLIGH HDW/FU					
NASA [/ IOA [3 /2H] [] P]	[] [F]	[] [P]	[X]
COMPARE [N /N] [и]	[]	[N]	[N]
RECOMMENDATIONS	: (If d	lifferent	from NAS	A)	
[/	_	1	[]	[] (A)	[] .DD/DELETE)
* CIL RETENTION	RATIONAL	LE: (If	applicable	e) ADEQUATE INADEQUATE	
REMARKS: LEFT AND RIGHT ANALYZED BY IOA	OXIDIZER	AND FUE SSESSMEN	L CROSSFEI T IDs ARCS	ED VALVE 3/4 5 12146X-121	1/5 SWITCH RE- L50X.

ASSESSM ASSESSM NASA FM SUBSYST: MDAC ID ITEM: CONTACTS LEAD AND	ENTEA EM:	r : #:	ID: :	ARCS			CROSS	FEED	VLV	NASA DAT BASELIN NI 3/4/5 SW	EW [j		
	CR	IT F	LIGH	_	1	REDUN	IDANC:	Y SCI	REENS		CI	_		
		HD	W/FU	NC	1	A	1	3	•	С	11.	TEM		
NASA IOA]	3	/3]	[[]	[]	[]	[] * 1		
COMPARE	[N	/N]	[.]	[]	[]	[]		
RECOMMEN	DA'	ric	ons:	(I 1	f dif	fere	nt fr	om N	'ASA)					
]	[]			[] ELETE	2)	
* CIL RE	TEN	T	ON I	COLTAS	ALE:	(If	appl	icab	le)					
REMARKS:									A INA	DEQUATE DEQUATE	Ì]		
LEFT AND ANALYZED	RI BY	GH	T OX	IDIZE SEE	R AN	D FUI SSMEN	EL CRO	OSSFI S ARG	EED V CS 12	ALVE 3/4 146X-121	/5 S 50X.	WITCH	RE-	

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:		02	SA DATA: ASELINE NEW]			
MDAC ID:	ARCS 1802 L/R OX	& FU CR	OSSFE	ED VL	V 3/	4/5 SWI1	сн с	GPC
LEAD ANALYST:								
ASSESSMENT:								
CRITICA FLIG		REDUND	ANCY	SCREE	NS		CIL	4
	UNC		1111	•				
NASA [/ IOA [3 /3] []	[]	[]	[] *
COMPARE [N /N] [1	[]	[]	[]
RECOMMENDATIONS	: (If d	lifferen	t fro	m NAS	A)			
[/] []	[]	[] (Al	[DD/D1] ELETE)
* CIL RETENTION	RATIONAL	E: (If	appli	cable	AD	EQUATE EQUATE]
REMARKS: LEFT AND RIGHT ANALYZED BY IOA	OXIDIZER . SEE AS	AND FUE	L CRC	SSFEE	D VA	LVE 3/4, .46X-121!	/5 ST 50X.	WITCH RE-

ASSESSMENT ASSESSMENT NASA FMEA	ID:	ARCS-18	303			NASA I BASE	DATA: LINE [] NEW []
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1		ARCS 1803 L/R OX	& FU	CROSSFE	ED VLV	3/4/5	SWITCH CLOSE
LEAD ANALY	ST:						
ASSESSMENT	*						
	ITICAL: FLIGHT HDW/FU	ľ	REDU A	JNDANCY B	SCREEN	s c	CIL ITEM
	IIDW/ FOI		A	D		C	
NASA [IOA [/ 3 /2R] [P]	[[F] [P]	[] * [X]
COMPARE [N /N] [и ј	[N] [n j	[N]
RECOMMENDA	TIONS:	(If d	liffer	cent fro	m NASA)	
ξ	/] [.]	[] []	[] (ADD/DELETE)
* CIL RETE	NTION 1	RATIONAI	LE: (1	If appli	·	ADEQUA NADEQUA	• •

LEFT AND RIGHT OXIDIZER AND FUEL CROSSFEED VALVE 3/4/5 SWITCH RE-ANALYZED BY IOA. SEE ASSESSMENT IDs ARCS 12146X-12150X.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-18	04					DATA: ELINE NEW	[]	
	ARCS 1804 L/R OX	& FU	CROSS	SFE	ED VLV	3/4/	5 SWIT	сн с	LOSE	
LEAD ANALYST:										
ASSESSMENT:										
CRITICAI FLIGH	JTY	REI	OUNDAN	CY	SCREEN	S		CIL	ſ	
	INC	A		В		С				
NASA [/ IOA [3 /1F] [F] [F] [P]		[x] *]	
COMPARE [N /N] [N] [N] [N]		[]]	
RECOMMENDATIONS:	: (If d	diff	erent	fro	om NASA	()				
[/] [[] [] [1	(A)	[DD/D:] ELETE)	
* CIL RETENTION	RATIONAL	LE:	(If ap	pl:		A I I H'(QUATE QUATE	[]	
REMARKS: LEFT AND RIGHT (ANALYZED BY IOA	OXIDIZER . SEE AS	AND SSES	FUEL SMENT	CR(OSSFEEI s ARCS	VAL 1214	VE 3/4 6X-121	/5 S 50X.	WITCH	RE-

ASSESSM ASSESSM NASA FM	ENT	I	D:		CS-1805	;	NASA D BASEL					[]	
SUBSYST				AR(18(MA)	-	1,	L/R OX	&	FU IS	or Ara	SWI	тсн		
LEAD AN	ALY	ST	:											
ASSESSMI	ENT	:												
	CR			ITY T	R	EDU I	NDANCY	sc	REENS			CIL ITEM	ľ	
	FLIGHT HDW/FUNC			A	A			(2					
NASA IOA	[3	/3]]]	[]	[[]		[]	*
COMPARE	[N	/N]	[]	[]	[]	ı	[]	
RECOMMEN	VDA!	ri(ons:	(If dif	fere	ent fro	om I	NASA)					
	[/]	[]	[]	[]	(ADI	[D/DE] LE	TE)
* CIL RE	TE	T.	ION :	RATI	ONALE:	(I1	f appli	cal	ble)					
						·			A	DEQUAT	•	:]	

REMARKS:

AFT MANIFOLD 1, LEFT AND RIGHT, OXIDIZER AND FUEL ISOLATION VALVE SWITCH RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12172X-12176X.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1806		NASA DATA: BASELINE NEW	_
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1806 MANIFOLD 1,	, L/R OX & FU	[SOL VLV SW]	тсн
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL		DUNDANCY SCREE	NS	CIL ITEM
FLIGH HDW/FU		В	С	
NASA [/ IOA [3 /2H] [R] [P] []] [P]	[] [P]	[] *
COMPARE [N /N] [N] [N]	[и]	[]
RECOMMENDATIONS	: (If diff	erent from NAS	A)	
] [r 1	[] DD/DELETE)
* CIL RETENTION	RATIONALE:	(If applicable	ADEQUATE	[]
REMARKS: AFT MANIFOLD 1, SWITCH RE-ANALY 12176X.	LEFT AND RI ZED BY IOA.	GHT, OXIDIZER SEE ASSESSMEN	AND FUEL IS NT IDS ARCS	OLATION VALVE 12172X-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1807	,	1	NASA DATA BASELINE NEW	[]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1807 MANIFOLD	1, L/R OX	& FU ISO	OL VLV SW:	ІТСН	
LEAD ANALYST:						
ASSESSMENT:						
CRITICAL: FLIGHT	r	EDUNDANCY	SCREENS		CIL ITEM	
HDW/FU	NC A	В	C	•		
NASA [/ IOA [3 /2R] [] [P] [] [P] [p]	[]	*
COMPARE [N /N] [N] [N] [N]	[]	
RECOMMENDATIONS:	(If dif:	ferent fro	om NASA)			
[/] [) [j		[] D/DELE	TE)
* CIL RETENTION R	ATIONALE:	(If appli				
REMARKS:			INA	DEQUATE DEQUATE	[]	
AFT MANIFOLD 1, L SWITCH RE-ANALYZE	EFT AND RID BY IOA.	GHT, OXII SEE ASSE	DIZER AND ESSMENT I	FUEL ISO	LATION 2172X-	VALVE

12176X.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1808		NASA DATA: BASELINE NEW	_
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1, 2	ARCS 1808 MANIFOLD	L, L/R OX & X	FU ISOL VLV SWI	ITCH OPEN
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL		EDUNDANCY SC	REENS	CIL ITEM
FLIGH HDW/FU		В	С	
NASA [/ IOA [3 /2F] [] [P] []] [F]	[] [P]	[x] *
COMPARE [N /N) [N] [N]	[N]	[N]
RECOMMENDATIONS:	(If dif	ferent from	NASA)	
ι /] [] []	[] (A)	[] DD/DELETE)
* CIL RETENTION	RATIONALE:	(If applica	ble) ADEQUATE INADEQUATE	
REMARKS: AFT MANIFOLD 1, SWITCH RE-ANALY: 12176X.	LEFT AND R ZED BY IOA.	IGHT, OXIDIZ SEE ASSESS	ER AND FUEL IS	OLATION VALVE

ASSESSMI ASSESSMI NASA FMI	ENT I	D:	ARCS-	-1809	•				NASA D BASEL		[]	
SUBSYSTE MDAC ID: ITEM: CONTACTS	:	2	ARCS 1809 MANIE	FOLD	1, L	/R 0	X & F	U IS	OL ATA	swi	тсн	OP	EN
LEAD ANA	LYSI	r:											
ASSESSME	ENT:												
		'ICAL 'LIGH	ITY T	R	EDUN	DANC	SCR	EENS			CIL ITEM	r	
	HD	W/FU	NC	A		F	3	(C		I I Dr.		
NASA IOA	[3	/3]	[]]]	[[]		[] :	*
COMPARE	[N	/ N]	[]	[]	[J		[]	
RECOMMEN	DATI	ONS:	(If	dif	ferer	nt fr	om N	ASA)					
	[/]	[]	[]	[]		[D/DE		TE)
* CIL RE	TENT	ION I	RATION	ALE:	(If	appl	icab	, A	ADEQUAT		[]	
AFT MANI SWITCH R 12176X.	FOLD E-AN	1, 1 ALYZ	LEFT A	ND R	IGHT, SEE	OXI ASS	DIZE ESSMI	R AND ENT I	FUEL Ds ARC	ISO S 12	LATI 2172	ON X-	VALVE

12176X.

ASSESSME ASSESSME NASA FME			N	iasa i Basei		[]						
SUBSYSTE MDAC ID: ITEM: CONTACTS			ARCS 1810 MANI	FOLD	1, L	/R OX	& F	U ISC	OF AT	V SWI	ITCH	GP	c
LEAD ANA	LYST	:											
ASSESSME	NT:												
		ICAL LIGH	ITY	R	EDUN	DANCY	SCR	EENS			CIL		
			NC	A	•	В	3	(2				
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	[N	/N]	ι]	[]	C]		[]	
RECOMMEN	IDATI	ons:	(1	f dif	fere	nt fr	om N	ASA)					
	[.	/]	[]	[]	[]	(A	[DD/I] DELE	ETE)
* CIL RI	ETENT	NOI	RATIO	NALE:	(If	appl	licab		ADEQU ADEQU	ATE ATE	[]	
REMARKS: AFT MANI SWITCH I 12176X.	FOLD) 1, IALY2	LEFT ZED BY	AND F	RIGHT SE	C, OXI	DIZE SESSM	R AN IENT	D FUE IDs A	L IS RCS	OLAT 1217	TION 72X-	VALVE

ASSESSMENT I ASSESSMENT I NASA FMEA #:	ID: ARCS-	-1811		NASA I BASEI	DATA: LINE [] NEW []
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 3,		FOLD 1, L,	/R OX & F	U ISOL VL	V SWITCH GPC
LEAD ANALYST	r:				
ASSESSMENT:					
	TICALITY FLIGHT	REDUNI	DANCY SCR	EENS	CIL ITEM
	DW/FUNC	A	В	С	IIEM
NASA [IOA [3	/]	[]	[]	[]	[] *
COMPARE [N	и /и ј	[]	[]	[]	[]
RECOMMENDATI	CONS: (If	differer	nt from N	ASA)	
· [/]	[]	[]	[]	[] (ADD/DELETE)
* CIL RETENT	TION RATION	ALE: (If	applicab	le) ADEQUA INADEQUA	
REMARKS: AFT MANIFOLD SWITCH RE-AN 12176X.) 1, LEFT A ALYZED BY	ND RIGHT, IOA. SEE	OXIDIZEI ASSESSMI	R AND FUEI	ISOLATION VALVE

ASSESSMEN ASSESSMEN NASA FMEA	T II		ARCS-1	.812					SA DATA BASELINI NEV]
SUBSYSTEM MDAC ID: ITEM: CONTACTS			ARCS 1812 MANIFO)LD 1	., L/R	ox	& FU	ISOL	. VLV S		
LEAD ANAI	YST	:									
ASSESSMEN	IT:										
C		ICAL LIGH	ITY	RE	DUNDA	NCY	SCREE	ens		CIL ITEM	[
			NC	A		В		С			
NASA IOA	[3	/ /3]	[]	[]	[]	[] *]
COMPARE	[N	/N]	[]	[1	[]	[]
RECOMMENI	ITAC	ons:	(If	difi	ferent	fre	om NAS	SA)			
	[/]	[]	[]	[] ([ADD/DE] :LETE)
* CIL RE	PENT	ION	RATION	ALE:	(If a	appl	icable	AI	DEQUATE DEQUATE]
REMARKS: AFT MANII SWITCH RI 12176X.	FOLD E-AN	1, ALYZ	LEFT AL	ND RI	IGHT, SEE	OXI ASS	DIZER ESSMEI	AND NT II	FUEL I Ds ARCS	SOLATI 12172	ON VALVE

ASSESSMI ASSESSMI NASA FMI	ENT	I		AI	RCS-:	18	13										EL.	ATA INE NEW	[]	
SUBSYSTE MDAC ID: ITEM: CONTACTS	}			18	RCS 313 ANIFO	OL	D :	1,	L/R		X	&	FU	I	SOI	۲ ر	ΊLV	SW:	ΙΤ¢	CH	CI	LOSE
LEAD ANA	LY	ST	:																			
ASSESSME	ENT	:																				
		F	ICAL LIGH W/FU	r			RI A		UNDA	NC	Y B	s	CREE	EN:	s c					CL CEN	1	
			W/ 10.				Α				ט				C							
NASA IOA	[3	/ /2R]		[P]]	F]]	P]			[[x]	*
COMPARE	[N	/N]		[N]		[N]		[N]			[N]	
RECOMMEN	IDA	TI	ons:		(If	d :	if	fei	rent	f	rc	om	NAS	SA))							
	[/]		[]		[]		[]		(AI	[/QC	DI] ELF	ETE)
* CIL RE	TE	NT	ION 1	RAI	'ION	ΛL	E:	(:	If a	pp) 1 i	ca	able	≥)								
,														I			CAU([]	
DEMINIO.																						

AFT MANIFOLD 1, LEFT AND RIGHT, OXIDIZER AND FUEL ISOLATION VALVE SWITCH RE-ANALYZED BY IOA. SEE ASSESSMENT IDS ARCS 12172X-

12176X.

ASSESSMI ASSESSMI NASA FMI	ENT	I		ARCS	-1814				1	IASA I BASE:		-]	
SUBSYSTEMDAC ID				ARCS 1814 MANI	:	2, L	/R OX	& F	U ISO	OL VL	v sw:	ITCH	ľ	
LEAD AN	ALY	ST	:											
ASSESSM	ENT	:						٠						
	CR				R	EDUN	DANCY	SCR	EENS			CII	_	
	,	_	LIGH W/FU		A		В	,	(2		111	W1	
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	(N	/N]	[]	[]	[]		[]	
RECOMME	NDA	TI	ons:	(I	f dif	fere	nt fr	om N	ASA)					
	[/]	[]	[]	[1	(A	[DD/I] DELE	ETE)
* CIL R	ETE	NT	ION	RATIC	NALE:	(If	appl	icab	1	ADEQU. ADEQU.	ATE ATE	[]	
REMARKS AFT MAN ANALYZE	IFO	LD Y	2, IOA.	LEFT SEE	AND R	IGHT SSME	FUE NT ID	L AN	D OX	IDIZE: 2177X	R SW	ITCH 81X.	IES	RE-

ASSESSMENT DATE: ASSESSMENT ID: ARCS-1815 NASA FMEA #:												DATA LINE NEW	ſ]			
SUBSYSTE MDAC ID:				ARCS 1815 MANIE	OLI	D 2	2,	L/R	оx	&]	FU IS	501	r Ari	V SW	ITCH	ł	
LEAD ANA	LY	ST	:														
ASSESSME	NT	:															
		F	LIGH'					UNDAN	CY	SC	REENS				CII		
]	HDI	W/FU	NC		A			В			С					
NASA IOA	[3	/ /2R]	[[P]] [P]	[[P]		[[]	*
COMPARE	[N	/N]	[N]	[N]	[N]		[]	
RECOMMEN	'DA'	TI	ons:	(II	đ	if:	fe:	rent	fr	om 1	NASA))					
	[/]	[]	[]	[] .		[DD/I		ETE)
* CIL RE	TE:	NT:	ION	RATION	IAL	Е:	(If ap	pl:	ical	ble) Il	IA IAI	DEQU DEQU	ATE ATE	[]	
REMARKS: AFT MANI ANALYZED	FO B	LD Y	2, IOA.	LEFT A	AND AS	R: SE:	IG SSI	HT, F MENT	UE:	L Ai s Ai	ND 02 RCS :	KII 12:	DIZE:	R SW -121	ITCI 81X.	IES	RE-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-18			ATA: INE [] NEW []	
	ARCS 1816 MANIFOL	D 2, L/	R OX & F	U ISOL VLV	SWITCH
LEAD ANALYST:					
ASSESSMENT:					
CRITICAI FLIGH	ITY T	REDUND	ANCY SCR	EENS	CIL ITEM
	NC	A	В	С	IIBM
NASA [/ IOA [3 /2F] [P]	[] [P]	[] [P]	[] *
COMPARE [N /N] [n j	[N]	[N]	[]
RECOMMENDATIONS:	(If d	ifferen	t from N	ASA)	
[/] []	[]	[]	[] (ADD/DELETE)
* CIL RETENTION	RATIONALI	E: (If a	applicab	•	
REMARKS:				ADEQUAT INADEQUAT	E []
AFT MANIFOLD 2, ANALYZED BY IOA.	LEFT AND SEE ASS	RIGHT, SESSMEN	FUEL AN I IDs AR	D OXIDIZER CS 12177X-1	SWITCHES RE-

ASSESSMENT DA ASSESSMENT ID NASA FMEA #:		317		NASA DATA: BASELINE NEW	ſ
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1, 2	1817 MANIFOI	LD 2, L/R	OX & FU	ISOL VLV SWI	TCH OPEN
LEAD ANALYST:	:				
ASSESSMENT:					
-	CALITY LIGHT	REDUNDA	NCY SCREE	ins	CIL ITEM
	/FUNC	A	В	С	
NASA [IOA [3	/] /2R]	[] [P]	[] [F]	[] [P]	[x] *
COMPARE [N	/N]	[и]	[N]	[N]	[N]
RECOMMENDATIO	ONS: (If	different	from NAS	SA)	
[/]	[]	[]	[] (A	[] DD/DELETE)
* CIL RETENT	ION RATIONA	LE: (If a	applicable	adequate	[]
REMARKS: AFT MANIFOLD ANALYZED BY	2, LEFT AN IOA. SEE A	D RIGHT, SSESSMENT	FUEL AND	OXIDIZER SW	ITCHES RE-

ASSESSMEN ASSESSMEN NASA FMEA	T ID:	E:	ARC	s-18	18				NA F	SA DA BASELI	ATA: [NE NEW]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS			ARC 181 MAN	S 8 IFOI	ъD 2,	, L/	R OX	& F	j 1 5 0	r ara	swi	тсн	OPE	1
LEAD ANALYST:														
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL ITEM														
		IGH V/FU			A		В		C	:				
NASA IOA					[]	[]	[]		[] *	•
COMPARE					[]	[1	[]		[]	
RECOMMEN	IDATI	ons	:	(If	dif:	fere	nt fi	com l	NASA)					
RECOIL					[3	[3	[3	(<i>1</i>	[\DD/!	DELE	TE)
* CIL R	[/] [] [] (ADD/DELETE) * CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []													
REMARKS AFT MAN ANALYZE	: IFOLI D BY) 2, IO	, LE	FT A	ND R ASSE	IGH SSM	r, FU Ent I	EL A Ds A	ND OX	(IDIZI 2177)	ER SI {-12	WITC 181X	HES	RE-

ASSESSM ASSESSM NASA FM SUBSYST MDAC ID ITEM: CONTACT:	ENTEA EM: S 3 ALY	# : *:	ID: :	ARC ARC 181	.9		L/R O	X &	FU IS	BAS		E []] TH GPC
ASSESSMI	ENT	:											
		F	LIG		F	REDU	NDANC	SC	REENS			CI	_
		HD	W/Ft	INC	A	1	F	3	(2		IT	EM
NASA IOA	[[FLIGHT HDW/FUNC]	[]	[]	[]		[] *
COMPARE	[N	/N		[]	[[[]
RECOMMEN	DAI	ľIC	ons:	(I	f dif	fer	ent fr	om N	(ASA)				
]		£]	(AI	[DD/D] ELETE)
* CIL RE	ren	ΤI	ON	RATIO	NALE:	(If	appl	icab	le)				,
REMARKS:									A INA	DEQUA DEQUA	TE	[]
AFT MANIF ANALYZED	BY	I	OA.	SEE	AND RI	GHT	NT IDS	L AN	D OXII	DIZER 177X-	SWI 1218	TCHI	ES RE-

ASSESSMEN ASSESSMEN NASA FMEA	\mathbf{T}	ID		ARCS	-1820				1	NASA DA BASEL]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS		. 4		ARCS 1820 MANI		, :	L/R OX	& F	u is	OL ATA	swi	тсн	GP	2
LEAD ANALYST:														
ASSESSME	T:	:												
(CR			ITY	RE	DU	NDANCY	SCR	EENS			CIL		
	1		LIGH V/FU	NC	A		В			С				
NASA IOA	[3	/ /3]	[]]]	[[]		[]	*
COMPARE	E	N	/N	1	[]	[1	[]		[]	
RECOMMEN	DA	TI	ons:	(1	[f dif:	fer	ent fr	om 1	NASA)					
	[/	3	[]	[3	[1	(A)	[DD/E] ELE	TE)
* CIL RE	TE	NT	ION	RATI	ONALE:	(1	[f appl	ical		ADEQUA NADEQUA]	
REMARKS: AFT MANI ANALYZEI		LD	2, IOA	LEFT . SE	AND R E ASSE	IGI SSI	HT, FUE MENT II	L A	ND O	KIDIZE 12177X	R SW -121	ITCH 81X.	IES	RE-

ASSESSMI ASSESSMI NASA FMI	ENT	' I	D:		-182	L						SA DA ASELI	INE]	
SUBSYSTI MDAC ID: ITEM: CONTACTS	:			ARCS 1821 MANI	FOLD	2,	L/R	ox	&	FU	ISOL	AFA	SWI	тсн	CI	OSE
LEAD ANA	TY	ST	:													
ASSESSME	ENT	:														
	CR	IT	ICAL LIGH	ITY	R	ŒDU	JNDAN	ICY	sc	REE	NS			CIL		
	1			NC	A	L		В			С			ITEM	4	
NASA IOA	[3	/3]	[[]	[]]		[]	*
COMPARE	[N	/N	1	[]	(]	1]		[]	
RECOMMEN	DA!	ΓΙ	ons:	(If	dif	fer	ent	fro	m	nas <i>i</i>	١)					
	[/]	[]	[]	(]		(AD	[D/DE] :LE	TE)
* CIL RE	TEI	T]	ON :	RATION	ALE:	(I	f ap	pli	cai	ble)						
REMARKS:											NADE	QUAT	E	[[]	
AFT MANI ANALYZED	FOI BY	D	2, OA.	LEFT A SEE	ND R	IGH SSM	T, F	UEL IDs	Al Al	ND C	XIDI 1217	ZER \$	5WI:	CHE	S I	RE-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-182	22		NASA DAT BASELIN NE	ra: ve [] ew []
	1822) 2, L/I	OX & FU	ISOL VLV S	SWITCH CLOSE
LEAD ANALYST:					
ASSESSMENT:					
CRITICAL FLIGH	ITY	REDUNDA	NCY SCRE	ens	CIL ITEM
HDW/FU		A	, B	С	1164
NASA [/ IOA [3 /2R] [] P]	[] [F]	[] [P]	[] * [x]
COMPARE [N /N] [N]	[N]	[N]	[N]
RECOMMENDATIONS:	(If di	.fferent	from NAS	5A)	
[/] [)	[]	[]	[] (ADD/DELETE)
* CIL RETENTION	RATIONALE	: (If a	pplicable	•	
				ADEQUATE INADEQUATE	
REMARKS: AFT MANIFOLD 2, ANALYZED BY IOA.					

ASSESSME ASSESSME NASA FME	NT	I		ARG	CS-18	323				ħ	IASA D BASEL	INE	-		
SUBSYSTE MDAC ID:				182	23	LD 3,	L/R	ох	& FU	J ISC	OL VLV	SW:	ITCH	Į.	
LEAD ANA	LY	ST	:												
ASSESSME	NT	:													
	CR					RED	UNDAN	ICY	SCRI	EENS			CII		
			LIGH W/FU			A		В		(2		TTE	M	
NASA IOA	[3	/]		[] []	[• :]	[]		[]	*
COMPARE	[N	/N]	!	[]	(-]	[]		[]	
RECOMMEN	IDA	TI	ons:		(If o	diffe	rent	fr	om Ni	ASA)					
	[/]	•	[]	([]	[].		[DD/I		ETE)
* CIL RE	ETE	NT	ION	RAT	IONA	LE: (If ap	pl	icab:		ADEQUA	TE	ſ	1	
DEMA DEC										IN	ADEQUA	TE	į	j	
REMARKS: AFT MANI ANALYZEI	FO	LD	3, IOA.	LEF S	T AN	D RIG	HT, (OXII	DIZE S AR	R ANI	D FUEI 2182X-	. SW 121	ITCH 86X.	IES	RE-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-18	24		NASA DATA BASELINE NEW	: []								
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1824 MANIFOL	D 3, L/	R OX & FU	ISOL VLV SW	/ITCH								
LEAD ANALYST:													
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL ITEM													
CRITICA	LITY	REDUND	ANCY SCRE	ENS	ITEM								
FLIGH HDW/F		A	В	С									
NASA [/ IOA [3 /2	_	[] [P]	[] [P]	[] [P]	[] *								
COMPARE [N /N		[и]	[N]	[и]	[]								
RECOMMENDATIONS	: (If	differe	nt from N	ASA)									
RECOMMENDATION		[]		r 1	[] (ADD/DELETE)								
* CIL RETENTION	* CIL RETENTION RATIONALE: (If applicable) ADEQUATE [] INADEQUATE []												
REMARKS: AFT MANIFOLD 3 ANALYZED BY IO	, LEFT A	ND RIGHT	r, OXIDIZI ENT IDS AI	ER AND FUEL RCS 12182X-1	SWITCHES RE- 2186X.								

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SUBSYST MDAC ID ITEM:	EM:	:		ARO 182 MAN	25	ъD 3,	L/R	CO.	. &	FU I	SOL 7		•	•	
LEAD AN	ALY	SI	?:											***	
ASSESSM	ENT	:													
	CR		ICAI LIGH	LITY		RED	UNDAN	ICY	SCI	REEN	s		CI	L	
]	HD	W/FU	INC		A		В			С		IT:	EM	
NASA IOA	[3	/ /2R]]	p]	[P]]] P]		[]	*
COMPARE	[N	/N				[И ј		ι		
RECOMMEN	DAT	CIC	ons:	()	[f di	ffer	ent	fro	om N	'ASA)					
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* CIL RE	TEN	TI	ON I	RATIO	NALE	: (I	f app	oli	cab.	le)					·
REMARKS:										IN	ADEQU ADEQU	ATE	ſ]	
AFT MANII ANALYZED	FOL: BY	D I	3, I OA.	EFT SEE	AND :	RIGH ESSM	r, ox Ent i	ID Ds	IZEI ARG	R ANI CS 1	D FUE 2182X	L SW]	TCHI	es p	Œ-

ASSESSMENT DATE ASSESSMENT ID: NASA FMEA #:	* =		DATA: ELINE [] NEW []											
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 1, 2	ARCS 1826 MANIFOLD 3, L	/R OX & FU ISOL VI	V SWITCH OPEN											
LEAD ANALYST:														
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM														
HDW/H	UNC A	В С	4 4 44 1											
NASA [/ IOA [3 /2	R] []	[] [] [F] [P]	[x] *											
COMPARE [N /N] [N]	[N] [N]	[N]											
RECOMMENDATIONS	: (If differen	nt from NASA)												
[/] []	[] []	[] (ADD/DELETE)											
	RATIONALE: (If	ADEQU.	ATE [] ATE []											
REMARKS: AFT MANIFOLD 3, ANALYZED BY IOA	LEFT AND RIGHT, . SEE ASSESSMEN	OXIDIZER AND FUE T IDs ARCS 12182X	L SWITCHES RE-											

ASSESSME ASSESSME NASA FME	NT	II		ARC	:S-182	27			N	BASE		[
SUBSYSTE MDAC ID: ITEM: CONTACTS				ARC 182 MAN	7	3,	L/R O	X & I	TU ISC	OL VL	v sw:	ITCH	I OPEN	
LEAD ANA	LY	ST	:											
ASSESSME	ENT	:												
	CR			YTI		REDU	NDANC	Y SCI	REENS			CII		
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NASA IOA]	3	/]	[]	[[]	[]		[] *]	
COMPARE	[N	/N]	[]	[]	[]		[]	
RECOMME	NDA	TI	ons:	:	(If d	iffer	ent i	from 1	NASA)					
	[/]	[]	נ]	[]	(A	[.DD/1] DELETE	:)
* CIL R	ETE	NT	ION	RAT	IONAL	E: (]	[fap]	plica		ADEQU ADEQU		-]	
REMARKS AFT MAN	IFC	LD	3, TOA	LEF	T AND	RIGI	HT, O	XIDIZ IDs A	ER AN RCS 1	D FUI 2182)	EL SW (-121	ITC 86X	HĖS RF]-

ASSESSMENT DE ASSESSMENT II NASA FMEA #:		-1828			1		ATA: INE [NEW [
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 3,	1828 MANI		L/R C)X & F	U ISC	OL VLV	SWITC	H GPC						
LEAD ANALYST														
ASSESSMENT:														
	ICALITY LIGHT	RED	UNDANC	Y SCR	EENS		CI IT	L EM						
HDV	/FUNC	A		В	C	2								
NASA [IOA [3	/] /3]	[]	[[]]	[[]]] *						
COMPARE [N	/N]	[]	[]	[]	[]						
RECOMMENDATIO	ONS: (I	f diffe	rent f	rom N	ASA)									
Γ	/]	[]	E]	[1	[(ADD/] DELETE)					
* CIL RETENT	ON RATIO	NALE: (If app	licab		ADEQUA'	re []	-					
REMARKS: AFT MANIFOLD ANALYZED BY					R AND	FUEL	SWITC	HES RE						

ASSESSMEI ASSESSMEI NASA FME	TY	II		ARCS-1	L829				1	NASA DA BASELI N	NE]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS		ARCS 1829 MANIFO	3, L/ I	R OX	& FU	ISC	OF AFA	SWI	TCH	GP	С			
LEAD ANA	LYS	ST	:											
ASSESSME	NT	:												
ı	CR:		CAL LIGH	ITY	R	EDUND	ANCY	SCRE	ENS			CIL		
]	_		_	A		В		(C				
NASA IOA	[HDW/FUNC]	[]	[]	[]		[]	*
COMPARE	[N	/N]	ĺ]	ί]	[]		[]	
RECOMMEN	DA'	TI	ons:	(If	dif	feren	t fr	om NA	SA)					
	[/	1	E	1	[]	[]	(AI	[DD/D		TE)
* CIL RE	TE	NT	ION	RATION	ALE:	(If	appl	icabl		ADEQUAT ADEQUAT		-]	
REMARKS: AFT MANI ANALYZED	FO B	LD Y	3, IOA.	LEFT A SEE	ND R ASSE	IGHT,	IXO II TI	DIZER s ARC	AN S 1	D FUEL 2182X-1	SW:	ITCH 86X.	ES	RE-

ASSESSME ASSESSME NASA FME	NT	II		ARCS-1	830				ASA DA BASELI N		-]	
SUBSYSTE MDAC ID: ITEM: CONTACTS		, (ARCS 1830 MANIFO	LD 3	3, L/F	e ox	& FU	ISO	r Ara	SWI	тсн	CLOSE
LEAD ANA	LYS	ST:	:										
ASSESSME	NT	:											
	CR:		ICAL LIGH	ITY	RI	EDUNDA	ANCY	SCREE	ens			CIL	vī
	1				A		В		С				-
NASA IOA	[[3	/3]	[]	[]	[]		[] *
COMPARE	[N	/N]	[]	[]	[]		[]
RECOMMEN	IDA'	TI:	ons:	(If	dif	feren	t fr	om NAS	SA)				
	[/]	[]	[]	[]	(AI	[DD/D] ELETE)
* CIL RE		NT	ION	RATION	ALE:	(If a	appl:	icable	A	DEQUA'		[]
REMARKS: AFT MANI ANALYZEI	reo	LD Y	3, IOA.	LEFT A	ND R	IGHT, SSMEN	OXI T ID	DIZER s ARC	AND 5 12	FUEL 182X-	SW]	ITCH 86X.	ES RE-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1831	l		NASA DATA BASELINI NEV	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 5, 6	ARCS 1831 MANIFOLD	3, L/R	OX & FU	ISOL VLV S	WITCH CLOSE
LEAD ANALYST:					
ASSESSMENT:					
CRITICAL FLIGH	r	REDUNDA	NCY SCRE	ens	CIL ITEM
HDW/FU	NC A	A	В	С	
NASA [/ IOA [3 /2R] [F) ([] [F]	[] [P]	[] * [X]
COMPARE [N /N] [N	i] [[N]	[N]	[и]
RECOMMENDATIONS:	(If dif	ferent	from NAS	SA)	
[/] [] [[]	[]	[] ADD/DELETE)
* CIL RETENTION	RATIONALE:	(If ap	pplicable	•	
REMARKS:				ADEQUATE INADEQUATE	
AFT MANIFOLD 3, 1 ANALYZED BY IOA.	LEFT AND R	RIGHT, C	OXIDIZER IDs ARCS	AND FUEL SW 3 12182X-121	ITCHES RE-

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SUBSYST MDAC ID ITEM:				ARC 183 MAN	_	4,	L/R O	K & I	TU IS	OL VL	v sw	'ITC	н	
LEAD AN	ALY	ST	:											
ASSESSMI	ENT	:												
	CR		ICAI LIGI	LITY	F	EDU	NDANCY	SCF	REENS			CII ITI		
		HD	W/FU	JNC	A		E	3	(C			DI'I	
NASA IOA	[3	/ /3]	[[]	[[]	[]		[]	*
COMPARE	[N	/N	3	[]	[]	[]		(]	
RECOMMEN	IDA!	ric	ons:	(1	f dif	fere	ent fr	om N	ASA)					
	[/]	[]	[3	[]	(AI	[DD/[] DELE:	TE)
* CIL RE	TE	(T	ОИ	RATIO	NALE:	(If	appl	icab	le)					
REMARKS:										DEQUA		_]	
MANIFOLD WITCHES	4,	. I E-A	EFT NAL	YZED	RIGHT BY IO	, OX A.	IDIZE SEE A	R AN	D FUE SMENT	L ISC	LATI	ON 3 12	VALV 1873	VE X-

12191X.

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SUBSYSTEM MDAC ID: ITEM:				1 2	17	LD) 4	,	L/R	C	X	&	FU	IS	OL	, VL	7 SW	ΊΤ	СН		
LEAD ANAI	LYS	T:	:																		
ASSESSMEN	T!	:																			
(CR]		[CAL]				RE	DŪ	INDA	NC	Y	SC	REE	NS					IL TEN	1	
	1	HDV	/FU	NC			A				В				С						
NASA IOA	[3	/ /2R]		[P]]	P]]	P]					*
COMPARE	[N	/N)		[N]		[N]		[N	3		(•]	
RECOMMEN	DA'	TI	ons:		(If	d :	ifi	fe:	rent	t :	fr	mc	NAS	SA)						
	[/]		[3		[]		[]	(2	ADI	[D/D:] ELH	ETE)
* CIL RE	TE	NT	ION	RAI	ION	AL	E:	(If a	ap	pl	ica	able	2)	A l	DEQU	ATE		[]	
														I	NA:	DEQU DEQU	ATE		[]	
REMARKS: MANIFOLD SWITCHES 12191X.		, E-	LEFT ANAI	A) LYZI	ND R ED B	IG Y	HT IO	Á.	oxi s	DI EE	ZE A	R Z SS	AND ESSI	F ME	UE NT	L IS	OLA AR	TI CS	ON 12	VA:	LVE 7X-

1100000	ARCS-1834			NASA DATA: BASELINE NEW	[]
NASA FMEA #:					
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1834 MANIFOLD	4, L/R	OX & FU	ISOL VLV SW	ГТСН
LEAD ANALYST:					
ASSESSMENT:					
CRITICA		REDUNDA	NCY SCREE	ns	CIL ITEM
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NASA [/ IOA [3 /2] [R] [] P]	[] [P]	[] [P]	[] *
COMPARE [N /N		и]	[N]	[и]	[]
RECOMMENDATIONS	: (If di	fferent	from NAS	SA)	
[/] [1	[]	[] (A	[] ADD/DELETE)
* CIL RETENTION	RATIONALE	: (If a	applicable	e) ADEQUATE INADEQUATE	
REMARKS: MANIFOLD 4, LEF SWITCHES RE-ANA 12191X.	T AND RIGH LYZED BY I	IT, OXII	DIZER AND EE ASSESSI	FUEL ISOLAT MENT IDS ARC	CION VALVE CS 12187X-

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SUBSYSTI MDAC ID: ITEM: COMMAND	•			ARCS 1835 MANIF	OL	D ·	4,	L/R	ОХ	. &	FU	I	so:	L V	LV	SWI	ĨΤ	СН	01	PEN
LEAD ANA	YLY	ST	:																	
ASSESSME	ENT	:																		
	CR	IT F	ICAL: LIGH:	ITY T		R	EDU	INDAI	1CY	S	CREE	ENS	5					[L PEN		
		HD	W/FUI	1C		A			В				С					L	1	
NASA IOA	[3	/ /2R]	[P]	[[F]		[P]]]	x]	*
COMPARE	[N	/N]	[N]	(N]		[N	3			[N)	
RECOMMEN	'DA'	ΓI	ONS:	(If	di	Ĺfí	er	ent	fr	om	NAS	A)								
	[/]	[]	(]		[]		(AD	[D/	DE] :LE	TE)
* CIL RE	TEI	T.	ON F	ATIONA	LE	E :	(I	f ap	pl	ica	ble									
DEWI Dreg												IN	AD AD	EQU EQU	ATI ATI	e e	[[]	
REMARKS: MANIFOLD SWITCHES 12191X.	4 , RI	, I E- <i>7</i>	LEFT NALY	AND RI	GH I	T,	0.	XIDI SEE	ZEI AS	R A	ND	FU	ET.	TS	OT.	እጥፕ <i>ነ</i>	- ∩N	77	- 'A T	VE X-

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SUBSYSTEM: MDAC ID: ITEM: COMMAND 1,		ARCS 1836 MANIFO	LD 4	, L/F	e ox	& FU	ISOL	' ATA	SWI	тсн	OPEN	ı
LEAD ANALY	st:											
ASSESSMENT	r:									CIL		
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	HDW/FU		A		В		С					
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COMPARE	[N /N]	[]	C]	[3		[]	
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* CIL RET	ENTION	RATION	ALE:	(If	appl	icabl		DEQU <i>I</i>		[]	
REMARKS: MANIFOLD SWITCHES	4, LEF RE-ANA	T AND F LYZED F	RIGHT BY IC	r, ox	IDIZI SEE A	er and Assess	FUI MENT	EL ISC T IDs	OLAT ARC	ION S 12	VALV 187%	'E {-

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SUBSYSTIMDAC ID:	:			18:		4,	L/R (OX & .	FU IS	OL V	LV SI	WITC	H G	PC
LEAD ANA	ALY	ST	:											
ASSESSME	ENT	':												
	CR	IT F	ICAI LIGH	LITY	R	EDU	NDANC	Y SCI	REENS			CI		
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COMPARE	[N	/N]	ſ]	[]	Γ]		[]	
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* CIL RE	ren	T	ON :	RATI(ONALE:	(I:	f app]	licab	A	DEQU.	ATE ATE	[]	
REMARKS: MANIFOLD SWITCHES 12191X.	4, RE	I -A	EFT NAL	AND ZED	RIGHT, BY IO	03	KIDIZE SEE A	er an Asses:	n			•	J VAL\ 187}	/E (-

	EM: :	ARC ARC 183	S 8		R OX	(& F	U IS		INE [NEW [•
ASSESSM	ENT:									
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NASA IOA	[3 /3]	[]	[]	[]	[] *
COMPARE	[N /N]	[]	[]	[]	[]
RECOMMEN	DATIONS	: (I	f diff	ferent	fre	om NA	ASA)			
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* CIL RE	TENTION	RATIO	NALE:	(If a	ppli	cabl	e)			
REMARKS:				•		_	A	DEQUATI DEQUATI]
MANIFOLD SWITCHES 12191X.	4, LEF	T AND 1 Lyzed 1	RIGHT, BY IOA	OXID . SE	IZER E AS	R AND SESS	FUE MENT	L ISOLA IDS AF	ATION S	VALVE 187X-

ASSESSMEN ASSESSMEN NASA FME <i>l</i>	T	ID	re:	ARCS	5-1839					ASA DA BASEL:		_]	
SUBSYSTEM MDAC ID: ITEM: COMMAND !				ARCS 1839 MAN		1, L,	/R OX	& FU	J ISO	r Ara	SWI	тсн	CIA	OSE
LEAD ANA	LYS	T:												
ASSESSME	NT:	:												
	CR.				R	EDUN	DANCY	SCRI	EENS			CIL		
	1		JIGH V/FU	IT INC	A		В		C	:				
NASA IOA	[3	/]	[]	[[]	[]		[]	*
COMPARE			/N		[)	[]	[3		[]	
RECOMMEN	IDA	TI	ONS	: ((If dif	fere	ent fr	om N	ASA)					
					[]	(A	[DD/I) DELI	ETE)
* CIL RI	ETE	ENT	OION	RAT:	IONALE	: (I	f appl	icak	ole) IN	ADEQU ADEQU	ATE ATE	[]	
REMARKS MANIFOL SWITCHE 12191X.	: D 4 S F	1 , RE-	LEF ANA	T AN LYZE	D RIGH D BY I	r, o oa.	XIDIZI SEE A	er ai Asses	nd fu SSMEN	EL IS T IDs	OLAT ARC	ION S 1	VA: 218	LVE 7X-

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-18	340		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM: COMMAND 5, 6	ARCS 1840 MANIFO	LD 4, L/R	ox & FU	ISOL VLV SWI	TCH CLOSE
LEAD ANALYST:					
ASSESSMENT:	LITY	REDUNDA	NCY SCREE	ens	CIL ITEM
FLIC HDW/	HT	A	В	С	
NASA [/		[] [P]	[] [F]	[] [P]	[x] *
COMPARE [N /		[и]	[N]	[и]	[N]
TO THE PART OF THE	s· (If	differen	t from NA	SA)	
RECOMMENDATION		[]		r 1	[] ADD/DELETE)
* CIL RETENTION				INADEQUATE	: []
REMARKS: MANIFOLD 4, L SWITCHES RE-A 12191X.	EFT AND	RIGHT, OX BY IOA.	IDIZER AN SEE ASSES	D FUEL ISOLA SMENT IDS AL	ATION VALVE RCS 12187X-

ASSESSI ASSESSI NASA FI SUBSYST MDAC II ITEM:	MEN MEA MEM	T #	ID:	AR AR 184	11		L/R (OX &	FU I	BAS		E [W [-]
ASSESSM	ENT	r:												
		F	ICA LIGI W/FI	LITY HT			INDANC	Y SC	REENS	;		CI	_	
			W/ F	ONC	•	A		В		С		IT	EM	
NASA IOA	Ì	3	/ /3]	[]]]]	j		[]	*
COMPARE	٠		/N		ſ	J	[]	[]		[]	
RECOMMEN	DA'	ric	ons:	(I	f dif	fere	ent fr	om N	ASA)					
1	[/	J	Į.]	[]	·[J	/ X D	[]	
* CIL RET	CEN	TI	ON 1	RATIO	NALE:	(If	appl	icab:	le)		(AL	D/D	ELE!	ΓE)
REMARKS:	'n	D .	T00-						INA	DEQUA DEQUA	ישות]]]	
AFT MANIF IN CIRCUI	TR	Y.	SE	ATION EE ASS	VALV SESSME	VE # ENT	5 RE-1 IDs Af	NALY CS 1	ZED :	BY IO	A DUI 75X.	E TC) CH	ANGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1842	NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1842 MANIFOLD 5, L/R	OX & FU ISOL VLV SWI	гтсн
LEAD ANALYST:			
ASSESSMENT: CRITICAL	LITY REDUNDAN	CY SCREENS	CIL ITEM
FLIGI HDW/F	TH	В С	
NASA [/ IOA [3 /2		[p] [p]	[] *
COMPARE [N /N	[и] [и]	[и] [и]	[]
RECOMMENDATIONS	S: (If different	from NASA)	
[/		[] [] ([] ADD/DELETE)
* CIL RETENTION	N RATIONALE: (If a	applicable) ADEQUATE INADEQUATE	[]
REMARKS: AFT MANIFOLD I IN CIRCUITRY.	SOLATION VALVE #5 SEE ASSESSMENT II	RE-ANALYZED BY 10A DS ARCS 12001X-12075	DUE TO CHANGE

ASSESSMENT DATE: ASSESSMENT ID: ARCS-1843 NASA FMEA #: SUBSYSTEM: ARCS MDAC ID: 1843 TTEM:					3	NASA DATA: BASELINE [] NEW []									
ITEM:	:				5,	L/R	ΟX	. 4	FU	IS	OT. V	'LV si	arme		
LEAD AN	ALYS	ST:									,	5 (5)	411C	·n	
ASSESSMI	ENT:														
	CRI	TICAI FLIGH	LITY IT	1	REDU	NDAN	CY	sc	CREEI	NS			CI	L	
	H	DW/Ft	INC	A	1		В			c	:		IT:	EM	
	[:	/ 3 /2R]	[[F]	[P]	[P]		[]	*
COMPARE	[]	N / N]	[N]	[N]	[N]		[]	
RECOMMEN	DATI	cons:	(If	dif	fere	ent f	rc	m 1	NASA)					
]	_					C]	(AI	[DD/D] ELE:	re)
* CIL RE	rent	ION I	RATION	ALE:	(If	app	li	cak	ole)				•		,
REMARKS:	or n	Taar	• • • • • • • • • • • • • • • • • • • •						I	VAL	EQU2	ATE	[]	
AFT MANIF	TRY.	· SE	ATION E ASSI	VALV ESSME	E # NT	5 RE	-Al AR(NAL CS	YZEC 1200) B)1X	Y IO	OA DU 075X.	E TO	ОСН	ANGE

ASSESSM ASSESSM NASA FM	ENT	. 1	D:	-	3-184	4	NASA DATA: BASELINE [] NEW []							
SUBSYST: MDAC ID ITEM: CONTACT:	:			ARCS 1844 MANI	!	5,	L/R O	K &]	FU IS	OL VL	V SW:	[TC	H 01	PEN
LEAD AND	ALY	ST	':											
ASSESSMI	ENT	:												
	CR		ICAL LIGH	ITY T	I	REDUI	NDANCY	SCF	REENS			CII		
	•	HD	W/FU	NC .	1	4	E	3	(C		ITI	1M	
NASA IOA	[3	/3]	[]	[]	[]		[]	*
COMPARE	[N	/N]	[]	[]	[)		[)	
RECOMMEN	DA'	ric	ons:	(II	f dif	fere	ent fr	om N	ASA)					
	[/)	[]	[]	[]		[D/D) ELE	TE)
* CIL RE	TEN	T	ON I	RATION	IALE:	(If	appl	icab						
REMARKS:										DEQUA'		[[]	
AFT MANI IN CIRCU	FOI ITR	D XY.	ISOI SI	LATION EE ASS	VAL ESSM	VE # ENT	5 RE-A	ANAL RCS	YZED 12001	BY 102 X-120	A DUI	E T	0 CI	HANGE

ASSESSME ASSESSME NASA FME	NT	IL	TE:	ARC	:S-18	345				ŀ	NASA DA BASELI N	NE	[]	
SUBSYSTE MDAC ID: ITEM: CONTACTS		, 2	2	ARC 184 MAN	-	LD	5, L/	R OX	& F	U IS	or Ara	SWI	TCH	OPI	€N
LEAD ANA	LYS	ST:	•												
ASSESSME	ENT	:													
	CR		ICAL			R	EDUNI	ANCY	SCF	REENS			CIL		
	1		LIGH W/FU			A		В			С				
NASA IOA	[3	/]		[[]	[]	[]		[]	*
COMPARE	[N	/N]		[)	[]	[]		[]	
RECOMME	NDA	TI	ONS:	:	(If	di	fere	nt fr	om 1	NASA)					
	[/]		[1	[]	[]	(A	[DD/E] ELE	TE)
* CIL R	ETE	נא	TION	RAT	CION	ALE	: (If	appl	ica		ADEQUA NADEQUA		[]	

AFT MANIFOLD ISOLATION VALVE #5 RE-ANALYZED BY IOA DUE TO CHANGE IN CIRCUITRY. SEE ASSESSMENT IDS ARCS 12001X-12075X.

ASSESSMEN ASSESSMEN NASA FME	T	II		ARC	:S-1846					ASA D BASEL		[]	
SUBSYSTEM MDAC ID: ITEM: CONTACTS		. 4		ARC 184 MAN		, L	/R OX	& I	FU ISO	L VLV	y swi	[TC]	H GPC	
LEAD ANA	LYS	T:	:											
ASSESSME	NT:	;												
(CRI		CAL		RE	DUN	DANCY	SCI	REENS			CI		
	F		LIGH W/FU		A		В		C					
NASA IOA	[3	/3]	[]	[[]]]		[] *	
COMPARE	ſ	N	/N]	[]	[)	[]		[]	
RECOMMEN	DA'	rI	ons:		(If dif	fere	ent fr	om 1	NASA)					
	[/]	[]	[]	[]	(A] DELETE)	
* CIL RE	TE	NT	ION	RAT	IONALE:	(If	appl	ica	P	DEQUA		[]	
REMARKS: AFT MANI IN CIRCU	FO	LD RY	isc	LAT SEE	ION VAL	VE # ENT	5 RE- IDs A	ANA RCS	LYZED 12001	BY I	OA D 075X	UE •	TO CHAI	1GE

ASSESSME ASSESSME NASA FME		ARCS-	1847		NASA DATA: BASELINE [] NEW []						
SUBSYSTE MDAC ID: ITEM: CONTACTS		ARCS 1847 MANIFO	OLD	5, L/	R OX	& FU	ısc	L VLV S	VITC H	GPC	
LEAD ANA	LYST:										
ASSESSME	ENT:										
	CRITICAL FLIGH		R	EDUND	ANCY	SCRE	ENS		CII	_	
	HDW/FU		A		В		C	!	ITE	.M	
NASA IOA	[3 /3]	[]	[]	[]	[] *]	
COMPARE	[N /N]	[]	[]	[1	ι]	
RECOMMEN	DATIONS:	(If	dif	feren	t fr	om NA	SA)				
	[/]	[1	[]	[] (A	[DD/D] ELETE)	
* CIL RE	TENTION	RATIONA	LE:	(If	appl	icabl	e)				
REMARKS:								DEQUATE DEQUATE	[]	
AFT MANI IN CIRCU	FOLD ISO	LATION EE ASSE	VALV SSMI	VE #5 ENT I	RE-	ANALY RCS 1	ZED 2001	BY IOA D X-12075X	UE T	O CHANG	

ASSESSMEN ASSESSMEN NASA FME	NT I		ARCS	5-1848				BASELII NI]
SUBSYSTER MDAC ID: ITEM: CONTACTS		6	ARCS 1848 MANI	2	, L/R ()X & F	u isc	L VLV S	SWITCH	CLOSE
LEAD ANA	LYST	:								
ASSESSME	NT:									
•		ICAL		RE	DUNDANG	CY SCR	EENS		CIL	
	_	LIGH W/FU		A		В	c	:		
NASA IOA	[3	/ /3]	[] []	[[]	[[] *]
COMPARE	[N	/N]	[] []	C]	[]
RECOMMEN	DATI	ons:	(If diff	erent	from N	IASA)			
	[/	1	[] []	[]	[(ADD/I] DELETE)
* CIL RE	TENI	NOI	RATI	ONALE:	(If ap	plicak	1	ADEQUAT ADEQUAT	_]
REMARKS: AFT MANI	FOLI) ISC	LATI	ON VALV	E #5 R	E-ANAI ARCS	LYZED 1200:	BY IOA 1X-1207	DUE 1	O CHANGE

ASSESSMENT DATE: ASSESSMENT ID: ARCS-1849 NASA FMEA #:							NASA DATA: BASELINE [] NEW []							
SUBSYSTE MDAC ID: ITEM: CONTACTS			ARCS 1849 MANIF	OLD	5,	. L/R	оx	& F	U IS	OL V	LV SW	ITC	H CLOS	SE _.
LEAD ANA	LYST	' :												
ASSESSME	NT:													
		ICAL LIGH			REI	UNDAN	CY	SCR	EENS			CI:		
	HD	W/FU	NC		A		В			С				
NASA IOA	[3	/ /2R]	[P]] [F]	[] P]		[]] * K]	
COMPARE	[N	/N]	[:	N]	[N]	[N]		[]	1]	
RECOMMEN	DATI	ons:	(If	di	ffe	rent	fro	om N	ASA)					
	[/]	[]	ι]	[]	(Al] DELETE	;)
* CIL RE	rent:	ION I	RATION	ALE	: (If ap	pli	cab:		ADEQU ADEQU		[]	
REMARKS: AFT MANII IN CIRCU	FOLD ITRY	ISOI . SI	LATION EE ASSI	VAI ESSI	LVE MEN	#5 R	E- <i>I</i> AF	NAL	YZED	BY 1	OA DI	JE 1	O CHA	NGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1850		NASA DA BASELI 1	
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 7, 8	ARCS 1850 MANIFOLD 5,	, L/R OX	& FU ISOL VLV	SWITCH OPEN
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL FLIGH	ITY RED	DUNDANCY	SCREENS	CIL ITEM
HDW/FU		В	С	
NASA [/ IOA [3 /2R] []]	[[F] []] [P]	[] * [X]
COMPARE [N /N] [N]	[И] [N]	[и]
RECOMMENDATIONS:	(If diffe	erent fro	om NASA)	
[/] []	Ι [] []	[] (ADD/DELETE)
* CIL RETENTION REMARKS:	RATIONALE: ((If appli	cable) ADEQUAT INADEQUAT	
AFT MANIFOLD ISO IN CIRCUITRY. S			NALYZED BY IOA CS 12001X-1207	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1851			NASA DATA BASELINE NEW	[]
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 7, 8	ARCS 1851 MANIFOLD 5	s, L/R OX	& FU I	SOL VLV SW	ITCH (OPEN
LEAD ANALYST:						
ASSESSMENT:						
CRITICAL: FLIGHT		EDUNDANCY	SCREEN	S	CIL ITEM	
HDW/FU		В		С		
NASA [/ IOA [3 /3] [] [] []	[] *
COMPARE [N /N) [] [] [1	[]
RECOMMENDATIONS:	(If dif	ferent fro	om NASA	.)		
[/] [] [] [[DD/DE] LETE)
* CIL RETENTION	RATIONALE:	(If appl		ADEQUATE NADEQUATE	•]
REMARKS: AFT MANIFOLD ISO IN CIRCUITRY. S				D BY IOA D		CHANGE

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1852	Ŋ	ASA DATA: BASELINE NEW	-
SUBSYSTEM: MDAC ID: ITEM: CONTACTS 9, 10	ARCS 1852 MANIFOLD 5,	L/R OX & FU ISO	OL VLV SWI'	гсн дрс
LEAD ANALYST:				
ASSESSMENT:				
CRITICAL		UNDANCY SCREENS		CIL ITEM
FLIGH HDW/FU		В	С	
NASA [/ IOA [3 /2F	[] [P]	[] [[P] [] P]	[] *
COMPARE [N /N] [N]	[и]	N]	[]
RECOMMENDATIONS:	(If diffe	erent from NASA)		
[/	_] (AI	[] DD/DELETE)
* CIL RETENTION	RATIONALE: (ADEQUATE IADEQUATE	[]
REMARKS: AFT MANIFOLD IS IN CIRCUITRY.	OLATION VALVE SEE ASSESSMEN	E #5 RE-ANALYZEI NT IDS ARCS 1200	BY IOA DO 01X-12075X	JE TO CHANGE

ASSESSMI ASSESSMI NASA FMI	ENT ID:		S-1853		NASA 1 BASE	DATA: LINE [] NEW []
SUBSYSTE MDAC ID: ITEM: CONTACTS	:	185	3	L/R OX	& FU ISOL VL	V SWITCH GPC
LEAD ANA	LYST:					
ASSESSME	NT:					
	FLI	SHT		JNDANCY	SCREENS	CIL ITEM
	HDW/1	FUNC	A	В	C	- 10H
NASA IOA	[3 /2] 2R]	[] [F]	[[F] []] [P]	[] * [x]
COMPARE	[N /N	1]	[N]	[N] [N]	[N]
RECOMMEN	DATIONS	3: (I	f differ	ent from	m NASA)	
	[/]	[]	E :] []	[] (ADD/DELETE)
* CIL RE	TENTION	RATIO	NALE: (I	f appli	cable)	
REMARKS:					ADEQUA INADEQUA	TE [j
AFT MANII IN CIRCU	FOLD IS	OLATIO SEE AS	N VALVE SESSMENT	#5 RE-AN	NALYZED BY 10. CS 12001X-120	A DUE TO CHANGE

ASSESSME ASSESSME NASA FME	NT	I			ARG	CS-185	34				ASA D BASEL		[]	
SUBSYSTE MDAC ID: ITEM: CONTACTS					ARC 18! MAI	= A) 5,	L/R OX	: & F	u Iso	L VLV	sw]	[TCF	H CL	OSE
LEAD ANA	ГĀ	ST	:												
ASSESSME	NT	:													
	CR			CAL			REDU	NDANCY	SCR	EENS			CI		
				IGH /FU			A	F	3	C					
NASA IOA]	3	3	/ /3]	[]	[]	[]		[]	*
COMPARE	[N	Ŋ	/N]	[)	[1	[]		[]	
RECOMME	NDA	T	ΙC	ns:		(If d	iffer	ent f	rom 1	NASA)					
	(•		/]	[]	[]	[]	(A		DELI	ETE)
* CIL R	ETI	EN'	r)	ON	RAT	'IONAL	E: (]	[f app	lical		ADEQU ADEQU]	
REMARKS AFT MAN IN CIRC	T TO	OL:	D Y	iso	OLAT SEE	TION V ASSES	ALVE SMEN'	#5 RE	-ANA: ARCS	LYZED 1200	BY I 1X-12	OA D 075%	UE	TO (CHANGE

ASSESSMI ASSESSMI NASA FMI	ENT	I		ARCS	-18	55								ASA BASI	ELI		[
SUBSYSTIMDAC ID:	•		12	ARCS 1855 MANI		D	5,	L/R	ox	&	FU	IS	501	. V]	ĽV	SW	ΙΤ	СН	C	LOSE	
LEAD ANA	ALY	ST	:																		
ASSESSME	ENT	:																			
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C																					
FLIGHT													С				-		•		
NASA IOA]	3	/ /2R]]	F]	[F]		[P]			[x]	*	
COMPARE	[N	/N]]	N]	[N]		[N]			[N]		
RECOMMEN	I A I	ric	ons:	(II)	f d:	Ĺ£ſ	fer	ent :	fro	m	NAS.	A)									
	[/]	[]	[]		[J			[D/	'DE] :LE	TE)	
* CIL RE	TEN	T	ON F	NOITAS	IALE	E:	(I	fapp	oli	.ca	ble										
REMARKS:											•	IN	AD AD	EQU EQU	AT AT	e e	[[]		
AFT MANI IN CIRCU	FOI ITR	D XY.	ISOI SE	ATION E ASS	VA ESS	LV	E NT	#5 RI 'IDs	E-A AR	NA CS	LYZ)	ED 00	В 1Х	Y I -12	OA 07!	DU 5X.	E	TO	C	HANGE	2

ASSESSME ASSESSME NASA FME	ENT	II		AR	cs-1	85		9-1							SA BASE	LI	NE	[x			
SUBSYSTE MDAC ID: ITEM: TALKBACE	:			18	CS 56 R OX	. 8	i F	T C	ROS	SF	EED	VL	٧	1/	'2 &	3,	/4,	/5	s	WI'	TC	H
LEAD ANA	ALY	ST	•	D.	HAR	T	IAN	Ī														
ASSESSMI	ENT	:																				
		F	ICAL:	r			RE A	DUN	DAN	ICY B		REE	NS	c C					II. TE			
			W/FUI										_		_					,	_	
NASA IOA	[3 3	/3 /2R]		[P]	[P]		[P]			[:]	*	
COMPARE	[/N]		[N]	[N]		[N]			(•)		
RECOMME	NDA	TI	ons:		(If	d :	ifi	fere	ent	fr	om	NAS	A))								
	C	3	/.2R]		[P]	1	[F)		[P]		(A) EI		E)
* CIL R		NT	ION	RA!	rion	AL	E:	(II	f ap	pp1	ica	able		A NA	DEQ!	TAU TAU	E E	!	[]		
REMARKS	:																					

AGREE WITH IOA ANALYSIS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1857 05-6KA-2153-1	NASA DATA BASELINE NEW	• •											
SUBSYSTEM: MDAC ID:	ARCS 1857	ISOL VLV 1/2 SWITCH	TALKBACK											
LEAD ANALYST:	D. HARTMAN													
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C														
	ITEM													
NASA [3 /3 IOA [3 /1R] [] [] [P]	[] [] [P] [P]	[] *											
COMPARE [/N] [N]	[и] [и]	[]											
RECOMMENDATIONS:	(If different	from NASA)												
[3 /2R] [P] [[P] [P] (A	[] DD/DELETE)											
* CIL RETENTION	RATIONALE: (If ap	oplicable)												
		ADEQUATE INADEQUATE	[]											
POSITION. REDUNI	DANCY PROVIDED.	CCURATE INDICATION OF LOSS OF ALL REDUNDANCED, POSSIBLY EFFECTS	NCY MAY LEAD											

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1858 05-6KA-21	.54 - 1		BASELINE NEW	[] [x]
SUBSYSTEM: MDAC ID: ITEM: TALKBACK	ARCS 1858 L/R OX &	FU TK IS	OL VLV 3	/4/5 A OR E	3 SWITCH
LEAD ANALYST:	D. HARTMA	VN			
ASSESSMENT:					
FLIGH	ITY R T NC A			s c	CIL ITEM
NASA [2 /1R IOA [3 /1R] [F	?][F] [P] [P] P]	[X] * []
COMPARE [N /] [] [и] []	[N]
RECOMMENDATIONS:	(If dif	ferent f	rom NASA	.)	
[3 /2R] -[F	?][P] [P] (AI	[D] DD/DELETE)
* CIL RETENTION	RATIONALE:	(If app	licable) I	ADEQUATE	[]
REMARKS: NASA FMEA CONSID LOSS OF ACCURATE PROVIDED. LOSS VALVE CLOSED, PO	INDICATION OF ALL REI	ON OF THE	VALVE F	OSITION. I	REDUNDANCY
AT MEETING WITH DISCUSSED. IT W	SUBSYSTEM AS AGREED	MANAGER UPON THA	ON 1/20/ T THE IS	88, NSTS 23 SUE (MULTI)	2206 WAS PLE FAILURES)

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1858A 05-6KA-2154-2		NASA DATA BASELINE NEW	[]										
MDAC ID:	ARCS 1858 L/R OX & FU TI	K ISOL VLV	3/4/5 A OR	B SWITCH										
LEAD ANALYST:	D. HARTMAN													
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT ITEM HDW/FUNC A B C														
·		_		r 1 4										
NASA [3 /3 IOA [3 /1R		[P]	[] [P]	[] *										
COMPARE [/N] [N]	[N]	[N]	[]										
RECOMMENDATIONS:	(If differen	nt from NAS	A)											
[3 /2R	[P]	[P]	[P]	[] DD/DELETE)										
* CIL RETENTION	RATIONALE: (If	applicable	ADEQUATE	[]										
REMARKS: THIS FAILURE MAY POSITION. REDUN TO FALSELY FAILI	DANCY PROVIDED.	LOSS OF	NDICATION O	F THE VALVE NCY MAY LEAI										

ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1859 05-6KA-2155-1	NASA BASI	DATA: ELINE [] NEW [X]
SUBSYSTEM: MDAC ID: ITEM: TALKBACK	1859	3, 4, 5, L/R OX	& FU VLV SWITCH
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:			
CRITICAL) FLIGHT	TY REDUNDA	NCY SCREENS	CIL ITEM
HDW/FUN		ВС	IIEM
NASA [2 /1R IOA [3 /1R] [P]] [P]	[F] [P] [P]	[X] *
COMPARE [N /] []	[N] []	[N]
RECOMMENDATIONS:	(If different	from NASA) .	
[3 /2R] [P]	[P] [P]	[D] (ADD/DELETE)
* CIL RETENTION R	ATIONALE: (If a	<i>-</i>	
		ADEQU INADEQU	
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

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ISSUE NOT RESOLVED AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88.

OPERATIONS.

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SUBSYSTE MDAC ID: ITEM:			ARCS 1860 L/R FU	TAN	K UL	LAGE	PPRES	s s	SENSOR		
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REMARKS											

IOA AGREES WITH NASA FMEA.

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SUBSYSTI MDAC ID: ITEM:			ARCS 1861 L/R F	ָט י	FA I	NK U	LLA	.GE	PPF	ŒSS	SENSO	R			
LEAD AND	ALYST	?:	D. HA	RTI	IAN	N									
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SUBSYSTEM MDAC ID: ITEM:	1:		ARCS 1866 L/R OX	TAN	K OU'	r PRI	ESS SE	NSC	OR .		
LEAD ANAI	LYST:		D. HAR	TMAN							
ASSESSMEN	T:										
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IOA AGREES WITH NASA FMEA.

ASSESSME ASSESSME NASA FME	NT ID:	1/29/ ARCS- 03-2A	1867		2		N	ASA DA' BASELII Ni]
SUBSYSTE MDAC ID: ITEM:	M:	ARCS 1867 L/R O	х та	NK O	UT PR	ESS :	SENSO	R		
LEAD ANA	LYST:	D. HAI	RTMA	N						
ASSESSME	NT:									
	CRITICAL FLIGH	T			DANCY	SCRI	EENS		CII	_
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SUBSYST MDAC ID ITEM:			ARCS 1868 L/R	3	NK I	EMP-	1 TEI	MP SEN	ISOR		
LEAD AN	ALYSI	C:	D. I	IARTMA	N.						
ASSESSM	ENT:										
		'ICAL 'LIGH'		F	REDUN	IDANC	Y SCI	REENS		CI	_
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COMPARE	[/N	3	[N]	[]	N]	[N	. 1	[]
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IOA AGREES WITH NASA FMEA.

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SUBSYSTEM MDAC ID:	1 :		ARCS 1869 L/R)	'AN	IK !	remp-	·1	TEM	P SI	ens	OR				
LEAD ANA	LYSI	::	D. F	IARTI	IAN	ſ										
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		FLIGHT OW/FUI			A			В			С					
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	1/29/88 ARCS-187 03-2A-20		65-1				ASA DAY BASELII NI	NE	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1870 L/R OX '	TAN:	к тем	IP-1	TEMP	SEN	SOR			
LEAD ANALYST:	D. HART	MAN								
ASSESSMENT:										
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SUBSYSTEM: MDAC ID: ITEM:	ARC 187 L/I	71	NK TEMP	-1 TEM	P SENSOR		
LEAD ANALYST	: D.	HARTMAN	1				
ASSESSMENT:							
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NASA DATA:

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1872 CONTROLLER, REMOTI	E POWER	
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:			
CRITICAL FLIGH		Y SCREENS	CIL ITEM
HDW/FU		в с	
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REMARKS: NASA FMEA CONSID OPERATING ALONE		RES. THIS RPC INAI	OVERTENTLY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:		L873				N	IASA DATI BASELINI NEV] (]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1873 CONTRO	LLEF	R, REI	MOTE	POWEI	R			
LEAD ANALYST:	D. HAR	(AMTS	1						
ASSESSMENT:									
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	05-6KA-2179-2	NASA DAT BASELIN NE	A: E[] W[X]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1874 CONTROLLER, REM	OTE POWER	
LEAD ANALYST:	D. HARTMAN		
ASSESSMENT:	-=prnD	ANCY SCREENS	CIL
CRITICAL FLIGH HDW/FI NASA [3 /1 IOA [3 /2 COMPARE [/N RECOMMENDATIONS	IT INC R] [P] R] [P]] []	B C [F] [P] [P] [N] []	ITEM [X] * [N]
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OPERATING ALON	III IIIII	FAILURES. THIS RPC	
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	£	/		[]]		J	ر ا
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ASSESSME ASSESSME NASA FME	NT	ID:	ARCS-	1876				Ŋ	IASA DAT BASELIN NE		k]
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LEAD ANA	LYS	T:	D. HA	RTMA	N						•
ASSESSME	NT:										
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ASSESSME ASSESSME NASA FME	NT I	D:	1/29 ARCS 05-6	-18	77		1				_		LINE NEW			
SUBSYSTE MDAC ID: ITEM:	M:		ARCS 1877 CONT	ROI	LE)	R, :	REM	OTE	POW	VER						
LEAD ANA	LYST	:	D. H	ARI	MA	N										
ASSESSME	NT:															
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SUBSYSTEM MDAC ID:	l:			B TROLLER	, REN	MOTE	POWE	R					
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #: SUBSYSTEM: MDAC ID: ITEM:	1/29/88 ARCS-1879 05-6KA-2180-3 ARCS 1879 CONTROLLER, F		ı	ATA: INE [] IEW [X]
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
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HDW/FUN		В	С	ITEM
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COMPARE [/N] []	[]	[]	[]
RECOMMENDATIONS:	(If differen	t from NA	SA)	•
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* CIL RETENTION RA	TIONALE: (If a	pplicable	(<i>2</i> : :)	DD/DELETE)
REMARKS: IOA AGREES WITH NA			ADEQUATE	[]

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SUBSYSTI MDAC ID: ITEM:			ARCS 1880 CONT		ER,	REMO	TE	PC	WER					
LEAD ANA	ALYS:	r:	D. H	ARTM	AN									
ASSESSME	ENT:													
	I	rical Fligh	${f T}$	I	REDU	NDAN	CY	sc	REENS	5		CII	_	
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	T	ID		ARC	29/8 CS-1 -6KA	88			L				N		A DAT SELIN NE	E	[x]	
SUBSYSTEM MDAC ID:	M:			ARG 188 COI	31	LI	ER	., R	REMO	TE	PC	WER							
LEAD ANA	LYS	T:		D.	HAR	TM	IAN	Ī											
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1	CRI		CAL				RE	DUI	NDAI	NCY	S	CREEN	18				CIL		
	H		IGH! /FUI				A			E	3		•	С					
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COMPARE	[/N]		[]		[]		[]			[]	
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* CIL RE		NT]	ION	RAT	NOI	ΑL	E:	(I	f a	pp:	lic				EQUAT EQUAT]	
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SUBSY MDAC ITEM:	ID:	:			ARC 188 COI	32	LLER	, RE	MOTE	POWER						
LEAD	ANAI	YS'	T:		D.	HAR	TMAN	Ī								
ASSES	SMEN	T:														
	C				ITY		RE	DUNI	ANCY	SCREE	:NS	;		CIL	1	
				[GH /FU			A		В			С				
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ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:	ARCS	-1883				ATA: INE [NEW [)] K]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1883 CONT		REMOTE	POWER			
LEAD ANALYST:	D. H	ARTMAN					
ASSESSMENT:							
CRITIC FLI	ALITY GHT	RED	UNDANCY	SCREEN	S	CIL	_
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COMPARE [/	N]	[]	[] []	[]
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* CIL RETENTION	RATION	VALE: (If appli	•	ADEQUAI CAUQAGAN]
REMARKS: IOA AGREES WITH	I NASA F	MEA			_		,

ASSESSMENT ASSESSMENT NASA FMEA #	DATE: ID: :	1/29/8 ARCS-1 05-6KA	88 884 -21	79-2						ASA [BASE]		[]	
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1884 CONTRO						R							
LEAD ANALYS	T:	D. HAR	TMA	N											
ASSESSMENT:															
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	1T I	[D:		ARC	9/8 CS-1 -6KA	88	5 17	9-	1							DAT ELIN NE	E	[}			
SUBSYSTEM MDAC ID:	4:			ARG 188 COI		LI	ÆR	١,	REM	OT:	E	POW	IER								
LEAD ANA	LYS'	r:		D.	HAR	T	IAN	ſ													
ASSESSME	NT:																				
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ASSESSMEN ASSESSMEN NASA FMEA	T ID		1/29 ARCS 05-6	/88 -1886 KA-218	0-2			na B	SA DA ASELI N	NE	[[]
SUBSYSTEM MDAC ID:	i:		ARCS 1886 CONT		, RI	EMOTE	POWI	ER				
LEAD ANAI	LYST:		D. H	ARTMAN	ī							
ASSESSME	T:										CIL	
(CRITI	CAI	YTI	RI	EDUN	DANCY	SCR	EENS			ITE	4
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SUBSYST MDAC ID ITEM:	EM: :		ARCS 1887 CONTR	OLLI	ER,	REMOT	E PO	WER		*****	[2	, 1
LEAD AN	ALYST	:	D. HA	RTMA	N.							
ASSESSMI	ENT:											
		LIGHT	•			NDANC	r sci	REENS			CIL	
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REMARKS: IOA AGREE								A	DEQUA DEQUA	TE	[]

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SUBSYSTEM: MDAC ID: ITEM:	:			AR(188 COI	R	LL	ER	, RE	MO	TE	POWER	2				
LEAD ANAL	YS'	T:		D.	HAR	TM	AN									
ASSESSMEN	T:															
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			IGH! /FUI				A			В			С			
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COMPARE	[/N]		ĺ]		[]	[]	[]
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REMARKS: IOA AGRE	ES	W	ITH	NA	SA F	ΜE	A.									

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SUBSYST MDAC ID ITEM:	EM:		AF 18	RCS 89 NTRO						WER					
LEAD AN	ALYSI	C:	D.	HAR	rmz	M									
ASSESSMI	ENT:														
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COMPARE	[/N]	[]	[N]	[]		[N]	
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AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT ASSESSMENT NASA FMEA	ID:	1/29/88 ARCS-18 05-6KA	390	9-1				SA DATA ASELINI NEV]	
SUBSYSTEM: MDAC ID: ITEM:		ARCS 1890 CONTRO	LLER	, REM	OTE	POWER					
LEAD ANALY	ST:	D. HAR	TMAN	•							
ASSESSMENT	!:										
CF	RITICAL		RE	DUND	ANCY	SCREE	NS		CIL ITE		
	FLIGH'		A		В		С				
NASA (3 /1R 3 /2R]	[P]	[P [P]	[P [P]	[] *]	
COMPARE	[/N]	[]	(]	[]	[]	
RECOMMENDA	ATIONS:	(Îf	dif	feren	t fr	om NAS	A)				
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* CIL RET	ENTION	RATION	ALE:	(If	appl	icable	A	DEQUATI DEQUATI]	
REMARKS: IOA AGREE	s WITH	NASA F	MEA.								

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-189			NASA DAT BASELIN NE	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1891 CONTROLLI	ER, REM	OTE POWE	er.	
LEAD ANALYST:	D. HARTMA	AN			
ASSESSMENT:					
CRITICAL FLIGH		REDUNDAI	NCY SCRE	ENS	CIL ITEM
HDW/FUI	NC A	\	В	С	TIEM
NASA [3 /1R IOA [3 /2R] [P)] [[F]	[P] [P]	[X] *
COMPARE [/N] [] [N]	[]	[N]
RECOMMENDATIONS:	(If dif	ferent	from NA	SA)	
[3 /3] [] []	[] (A	[D] DD/DELETE)
* CIL RETENTION F	ATIONALE:	(If ap	plicable	e)	
REMARKS:				ADEQUATE INADEQUATE	
NASA FMEA CONSIDE OPERATING ALONE H	RS MULTIP AS NO EFF	LE FAIL ECT.	URES. 1	THIS RPC INA	DVERTENTLY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	ID:	ARC	9/88 S-1892 6KA-2		·2			nasa Basi	LIN	E [) x j	
SUBSYST			ARC 189 CON	2	ER,	REMOTE	e Poi	WER					
LEAD AND	ALYS	ST:	D. 1	HARTMA	N								
ASSESSMI	ENT:	:											
	CRI	TICAL FLIGH		R	EDU	NDANCY	SCI	REENS			CI	_	
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NASA IOA	[[3 /3 3 /3]	[[]	[]]]		[]	*
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ASSESSME ASSESSME NASA FME	NТ	ID		AR	29/8 CS-1 -6KA	89	3 18	0-1					SA DAT ASELIN NE	E	[x]	
SUBSYSTE MDAC ID: ITEM:	M:			18 CO	93	LI	ÆR	, RI	EMOTE	PO	WER						
LEAD ANA	LYS	T:		D.	HAR	TM	IAN	ſ									
ASSESSME	NT:	:															
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NASA IOA	[3	/1R /2R]		[P P]	[F))	[[P P]		[]	*
COMPARE	[/N]		[1	[]	ſ]		[]	
RECOMME	NDA	TI	ons:		(If	d	if	fere	nt fi	com	NASA)					
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REMARKS IOA AGR	: EES	W	ITH	NA	SA F	ΜE	A.										

ASSESSMEN ASSESSMEN NASA FMEA	T :	[D	re:	AKC	9/88 S-1894 6KA-21	80-2			NA E	SA DA BASELI N	NE	[x]
SUBSYSTEM MDAC ID:	:			ARC 189 CON		R, RE	MOTE	POWE	ER				
LEAD ANA	LYS	T:		D.	HARTMA	M							
ASSESSME					T	REDUNI	DANCY	SCR	EENS			CIL	_
		FI	JIGH			REDUNI A	В		c	!		ITE	M.
	ŀ	IDV	V/FU	NC	•	•			_			r	1 *
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NO DIFF	ERI	EN	CES.	i									

ASSESSI ASSESSI NASA FI	ILN'	r .	ID:	A	./29/8 RCS-1 5-6KA	89	5 180) - 1				1	NASA Bas	ELI	TA: NE [EW []
SUBSYST MDAC ID ITEM:		;		1	RCS 895 ONTROI	LLE	ER,	REMO	TE	E PO)WER						I
LEAD AN	ALY	ST.	? :	D	. HARI	'MA	N										
ASSESSM	ENT	!:															
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COMPARE	[/N]	[]	C]	[]		[]	
RECOMMEN	DA'I	CIC	ons:		(If d	if1	er	ent f	rc	om N	IASA)						
+ GTI >-	[/		[[]	(A	[.DD/[TE)
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ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:					NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1896 CONTROL	LER, RI	EMOTE 1	POWER		
LEAD ANALYST:	D. HART	MAN				
ASSESSMENT:						
CRITICAL	ITY	REDUN	DANCY	SCREENS	5	CIL ITEM
FLIGH HDW/FU		A	В		С	
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COMPARE [/N	1	[]	ĺИ] [1	[и]
RECOMMENDATIONS	(If	differe	ent fro	m NASA)	
[3 /3					1	[D] ADD/DELETE)
* CIL RETENTION	RATIONA	ALE: (I	f appl:	icable) I	ADEQUATE NADEQUATE	[]
REMARKS: NASA FMEA CONSI OPERATING ALONE	DERS MUI	LTIPLE EFFECT	FAILUR	ES. TH	HIS RPC IN	ADVERTENTLY
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE THEREFORE, THIS	WAS AGA	ERENT I	NTERPR	ETATIO	/88, NSTS SSUE (MULT NS OF NSTS	22206 WAS IPLE FAILURES 22206.

ASSESSM ASSESSM NASA FM	ENT	ID:	Al	/29/88 RCS-18 5-6KA-	397	.79)-1				N	ASA D BASEL		[x :]
SUBSYST MDAC ID ITEM:			18	RCS 897 ONTROL	ΙE	R,	REMO	TE	: PC	WER				•	_	I
LEAD AN	ALYS	T:	D.	HART	MA	N										
ASSESSMI	ENT:															
		TICAI FLIGH			R	ED	UNDAN	CY	sc	REEN	s			CI	_	
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REMARKS: IOA AGREI	es W	ITH 1	IASA	FMEA	•					IN	ADI ADI	EQUAT!	E [•]	

ASSESSMEN ASSESSMEN NASA FME	I TN	D:	ARCS	/88 -1898 KA-218	0-2					DATA: LINE NEW	[]	
SUBSYSTEMDAC ID:	M:		ARCS 1898 CONT		2, R	EMOTE	POW	ER					
LEAD ANA	LYSI	1.	D. H	ARTMAN	ľ								
ASSESSME	NT:												
		ICAL		RI	EDUN	DANCY	SCR	EENS			CIL		
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COMPARE	[/]	[]	[]	[]		[]	
RECOMMEN	DAT]	cons:	(]	[f dif	fere	ent fr	om N	ASA)					
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* CIL RE		TION	RATI(ONALE:	(If	f appl	icab	Æ		JATE JATE]	
REMARKS:		CES.											

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-18	199			ATA: INE [NEW [X	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1899 CONTROL	LER, RE	MOTE POW	ŒR		
LEAD ANALYST:	D. HART	MAN				
ASSESSMENT:						
CRITICAL FLIGH	T		ANCY SCR		CIL ITE	
HDW/FU	NC	A	В	С		
NASA [3 /1R IOA [3 /2R] [P] P]	[P] [P]	[P] [P]	[] *]
COMPARE [/N] []	[]	[]	[]
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* CIL RETENTION E REMARKS: IOA AGREES WITH N			applicab	le) ADEQUAT INADEQUAT]

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:		-2	BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1900 CONTROLLER,	REMOTE POWER		
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL: FLIGH		OUNDANCY SCREEN	īS	CIL ITEM
HDW/FU		В	С	
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[3 /3] []	[]		[D] DD/DELETE)
* CIL RETENTION	RATIONALE: ((If applicable) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONSID OPERATING ALONE	ERS MULTIPLE HAS NO EFFE	E FAILURES. T	HIS RPC INAI	OVERTENTLY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	I TA	D:	ARC	29/88 CS-190 -6KA-2	01 217	9-1					A DATA SELINE NEW) x]	
SUBSYSTE MDAC ID:			ARC 190 CON	-	LER	, REM	OTE	POW	ŒR					
LEAD ANA	LYSI	:	D.	HARTM	IAN									
ASSESSME	NT:													
	F	LIGH	T		RE:	DUNDA		SCR	EENS			CI		
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LEAD ANA	LYS	T:		D.	HARTMAN									
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NA COLUMN]	ί]	Ţ.	1	. [1] Id A))/DE] :LETE)	
* CIL F	ETI	ENT	NOI?	ran	CIONALE:	(11	f app	lical	ole) Il	ADEQUA ADEQUA	ATE ATE	[]	
REMARKS	: FER	EN	CES.	•										

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SUBSYST MDAC ID ITEM:		:		19	RCS 03 NTROLI	ÆR,	REMO	TE	PO	WER				Ī	
LEAD AN	ALY	(S)	r:	D.	HARTM	AN									
ASSESSM	ENT	!:													
		F	'ICAL 'LIGH	T	•	REDI	UNDAN	CY	SC	REENS	S		CI		
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NASA IOA]	3 3	/1R /2R]	[]	?]	[P P]]	P P]	[]	*
COMPARE	[/N]	[]	ε]	[]	[]	
RECOMMEN	'DA'	CIC	ons:	(If dif	fer	ent f	ro	m N	ASA)					
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* CIL RE	TEN	ΤI	ON R	ATI	ONALE:	(I :	f app	li	cab.	le)					•
REMARKS: IOA AGREI										1	ADI	EQUATE EQUATE	[]	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-1904		NASA DA' BASELII N	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1904 CONTROLLE	R, REMOTE	POWER	
LEAD ANALYST:	D. HARTMA	N		
ASSESSMENT:				
CRITICALI FLIGHT		EDUNDANCY	SCREENS	CIL ITEM
HDW/FUN	IC A	. В	С	
NASA [3 /1R IOA [3 /3] [P] [F] [P]] []	[X] *
COMPARE [/N] [N] [N] [N]	[N]
RECOMMENDATIONS:	(If dif	ferent fro	om NASA)	
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* CIL RETENTION F	ATIONALE:	(If appli	.cable) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONSIDE OPERATING ALONE H	RS MULTIP	LE FAILURE ECT.	S. THIS RPC IN	IADVERTENTL Y

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DAT ASSESSMENT ID: NASA FMEA #:		L905				DATA: SELINE NEW	[
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1905 CONTRO	OLLER, RI	EMOTE	POWER				
LEAD ANALYST:	D. HA	RTMAN						
ASSESSMENT:								
	CALITY	REDUNI	DANCY	SCREE	NS		CIL	
	FUNC	A	В		С			
NASA [2 / IOA [2 /	/2] /2]	[]	[]	[]		Х] Х]	*
COMPARE [/]	[]	[]	[]		[]
RECOMMENDATION	NS: (If	differe	nt fr	om NAS	A)			
[,	/]	[]	[]	[]	(A	[DD/I] ELETE)
* CIL RETENTION	ON RATION	ALE: (If	appl	icable	ADE	QUATE QUATE	[]
REMARKS: NO DIFFERENCE	s.							

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-190 05-6KA-2	06 2184-2		NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:		LER, REMO	TE POWER		
LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:		DEDINDAN	ICY SCREE	NS	CIL
CRITICA: FLIG	LITY HT	KEDONDA		С	ITEM
HDW/F	UNC	A	В		
NASA [3 /1 IOA [3 /3	R]	[P] []	[F] []	[P] []	[X] * []
COMPARE [/N		[N]	[N]	[и]	[N]
	. (Tf	different	from NAS	SA)	
RECOMMENDATIONS); (II		. 1	r 1	[D]
[3 /	3]	[]	[]	(ADD/DELETE)
* CIL RETENTIO	N RATION	ALE: (If a		INADEQUATE	; []
REMARKS: NASA FMEA CONS OPERATING ALON	IDERS MU	LTIPLE FA	ILURES.	THIS RPC IN	IADVERTENTLY
4				ing NOME	22206 WAS

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSI ASSESSI NASA FI SUBSYST MDAC ID ITEM: LEAD AN	EN EA EM :	* * :	: :	AR 05 AR 19	CS-19(-6KA-2 CS	184 ER,		TE PO)WER	NASA BAS	A DATA SELINE NEW	(x]
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		HD	W/FI	UNC	2	A		В	(2		IT:	EM	
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COMPARE	[/]	ĺ]	[]	[]		[]	
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* CIL RET	ren	TI	ON 1	RATIC	NALE:	(I1	appl	icab	le)			,, U.	2116	IE)
REMARKS: NO DIFFER	EN	CE:	s.		٠				AI INAI	DEQU <i>I</i> DEQU <i>I</i>	TE []	

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	HI	OW/FU	NC			A			E	3			С						-	
NASA IOA	[3	3 /3 3 /2R]		[P]		F]		[[P]]	x]	*
COMPARE	[/N]		[N]	[N]		[N]			[N]	
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DEMADKS.											1				JATE		Ĺ		j	

IOA AGREES WITH NASA FMEA.

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COMPARE	[/N]		[]	[]]]			[]	
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REMARKS:	EES	W	/ITH	NA:	SA F	ΜE	Α.														

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-19 05-6KA-	910) - 2		:	NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1910 DIODE						
LEAD ANALYST:	D. HAR	TMAN					
ASSESSMENT:							
CRITICA		REI	DUNDA	NCY	SCREENS	3	CIL ITEM
FLIG HDW/F		A		В		С	
NASA [3 /3 IOA [3 /2] R]	[[P]	[[F] [p]	[x] *
COMPARE [/N]	[14	3	ίи] [N]	[N]
RECOMMENDATIONS	: (If	diff	erent	fro	m NASA)	_
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* CIL RETENTION	RATION	ALE:	(If a	appl		ADEQUATE NADEQUATE	[]
REMARKS: IOA AGREES WIT	i nasa f	MEA.					

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LEAD AN	ALY	ST	':	D.	НА	RT	MA	N													
ASSESSMI	ENT	:																			
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ASSESSMENT DA ASSESSMENT ID NASA FMEA #:	TE: 1/29 ARCS- 05-61	-1912		2		NASA 1 BASE		[[x]
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LEAD ANALYST:	D. H2	ARTMA	N						
ASSESSMENT:									
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COMPARE ['N]	[N]	[N]	[N]	(]
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* CIL RETENTION REMARKS: IOA AGREES WIT			(If	appl:	icab]	le) ADEQUAT INADEQUAT)]

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-191 05-6KA-2			NASA DATA: BASELINE NEW	[x]
MUAC ID.	ARCS 1913 DIODE				
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
CRITICAL		REDUNDA	NCY SCREE	NS	CIL ITEM
FLIGH HDW/FU		A	В	С	
NASA [3 /1R IOA [3 /2R] [P] P]	[F] [F]	[P] [P]	[X] * [X]
COMPARE [/N] []	[]	[]	[]
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* CIL RETENTION	RATIONAL	E: (If	applicable	≥) ADEQUATE INADEQUATE	[]
REMARKS: IOA AGREES WITH	NASA FME	EA.			

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* CIL RE	ren	ΤI	ON R	ATI	ONALE	:	(If	app	oli	.cab	le)		(A)	DD/D	E LE'	ľE)
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LEAD ANA	LYS	T:		D.	HAR	MAMT								
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ASSESSME ASSESSME NASA FME	NT I	D:	ARCS-	1918				1	NASA BASE	LINE	-] {]	
SUBSYSTE MDAC ID:			ARCS 1918 DIODE										
LEAD ANA	LYST	:	D. HA	RTMA	N								
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REMARKS: NO DIFFE	RENC	ES.							2,	- 		,	

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:				NASA DAT BASELIN NE	
	ARCS 1919 DIODE				
LEAD ANALYST:	D. HARTM	AN			
ASSESSMENT:					
CRITICAL	EENS	CIL			
FLIGH HDW/FU		A	В	С	ITEM
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COMPARE [/N] []	[]	[]	[]
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* CIL RETENTION REMARKS:			applicab	le) ADEQUATE INADEQUATE	
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LEAD ANA	LYSI	r:	D. H2	RTMA	N						
ASSESSME	ENT:										
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IOA AGREES WITH NASA FMEA.

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NASA FME	A #		ARCS- 05-6K			2			BASELINE NEV] 3 7 [}	
SUBSYSTE MDAC ID: ITEM:			ARCS 1924 DIODE								
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NO DIFFERENCES.

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SUBSYSTE MDAC ID:	M:			ARCS 1926 DIOI	5									
LEAD ANA	LYS	T:		D. I	<u>IARTMAN</u>	Ī								
ASSESSME	NT:	;						CODI	PENS			CIL		
	CRI	ΙΤΙ	CAI	YTI	RI	EDUND	ANCY	SCRI	FERD			ITEN	1	
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LEAD ANALYST:	D. HARTMA	N				
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LEAD ANALYST:	D. HARTMA	N				
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LEAD ANALYST:	D. HARTMA	AN .			
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SUBSYSTEM: MDAC ID: ITEM:	ARCS 1943 DIODE						
LEAD ANALYST:	D. HART	MAN					
ASSESSMENT:							
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LEAD ANALYST:	D. HART	MAN			
ASSESSMENT:					
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LEAD ANALYST:	D. HARTMA	N						
ASSESSMENT:								
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LEAD ANALYST:	D. HARTMA	N		
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LEAD ANALYST:	D. HART	MAN							
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LEAD ANALYST:	D. HARTM	AN			
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ASSESSMI	ENT	:																		
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NASA IOA]	3	/1R /2R]]	P P]		[[F F]	ĺ		?]			[х ј х ј	*
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* CIL RE	;			RATI	ONALE:	(If	appl	icab	7	ADEQU ADEQU		[]	

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SUBSYSTE MDAC ID:			ARC 197 DIO	7											
LEAD ANA	LYS	r:	D. :	HARTMAI	N										
ASSESSME	SSESSMENT: CRITICALITY REDUNDANCY SCREENS CIL														
FLIGHT															
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NASA IOA	[;	2 /2 2 /2]]]]]	[]		X]]	*		
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REMARKS:		CES.													

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SUBSYSTI MDAC ID ITEM:				ARCS 1978 DIOI	3									
LEAD AND	ALY	ST:	:	D. H	IARTMA	N								
ASSESSMI	ENT	:												
	CR			LITY	R	EDUI	NDANCY	SCF	REENS			CI		
]		IGI I/FU	UNC	A		E	3	C	3		ITI	EM	
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REMARKS:									THE	PPGOW	IE	ι	J	

NO DIFFERENCES.

ASSESSMEN ASSESSMEN NASA FME	T	ID		ARC	9/88 S-19 6KA-	79	0-1			1		DATA: LINE NEW	[]	
SUBSYSTEM MDAC ID:	i:			ARC 197 DIC	9											
LEAD ANA	LYS	T:		D.	HAR	CMAN										
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RECOMMEN	DA"	ric	NS:		(If	diff	ere	ent fr	om 1	NASA)						
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* CIL RE		T	ON	RAT	IONA	LE:	(II	f appl	ica		ADEQ IADEQ	UATE UATE	[]	
REMARKS:		ארז	25.													

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-1980 05-6KA-221	4-2	1	NASA DATA: BASELINE NEW	
SUBSYSTEM:	ARCS 1980 DRIVER, HY				
LEAD ANALYST:	D. HARTMAN	ſ			
ASSESSMENT:					
CRITICAL	}	CIL ITEM			
FLIGH HDW/FU	NC A	В		С	
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* CIL RETENTION	RATIONALE:	(If appl	icable) Il	ADEQUATE NADEQUATE	[]
REMARKS: NASA FMEA CONTAI ALONE HAS NO EF	INS MULTIPL	E FAILURI			
AT MEETING WITH DISCUSSED. IT WAS RAISED DUE	מששמת אני	UPON THAT T INTERP	RETATION	SUE INCULT	<u> </u>

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-1981 NASA FMEA #: 05-6KA-22													N		DA' ELI N	NE	[[X]	
SUBSYST MDAC ID		:		19	RCS 981 RIVE	R,	н	YBR	RID											
LEAD AN	ALY	ST	':	D.	на	RT.	MA	N												
ASSESSM	ENT	:																		
	CR		ICAL LIGH				R	EDU	NDA	AN(CY	SCI	REEN	s				CIL ITEI		
		HD	W/FU	NC			A				В			С			•			
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COMPARE	[/N]		[]		[]	[]		İ	Ţ.	J	
RECOMME	NDA	TI	ons:		(If	đ:	Ĺfí	fer	ent	: f	ro	om N	IASA))						
	[/]		[]		[]	[]	(ADE	D/DE] ELF	ETE)
* CIL RI REMARKS: IOA AGRI	:							(I:	f a	pp	11	.cab	•			JATE JATE		•]	

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SUBSYSTEM MDAC ID: ITEM:	M:		ARC 198 DRI		H	/BRI	D										
LEAD ANA	LYSI	r:	D.	HART	IAM	1											
ASSESSME	NT:																
•		CICAL FLIGH			RI	EDUN	DANG	CY	sc	REENS	;			CI	L EM	ſ	
	_	W/FU	_		A			В			С						
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COMPARE	[/N]		[]	[N]	[]		[N]	
RECOMMEN	DAT:	ions:	((If o	dif	fere	ent :	fro	om	NASA))						
	[:	3 /3]		[]	[]	C] ·	(A		D / DI		TE)
* CIL RE	TEN'	TION	RAT	EONA:	LE:	(If	ap	pl:	ica				JATE JATE]	
REMARKS:	A C	ОМТАТ	NS I	MULT	IPL	E FA	ILU.	RE:	s.	THIS	3 D	RIV	VER C	PE	RA′	rin	īG

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ALONE HAS NO EFFECT.

ASSESSME ASSESSME NASA FME	NT ID	•	29/88 CS-198 -6KA-2			NASA DATA BASELINI NEV]	
SUBSYSTE MDAC ID:		ARC 198 DRI		HYBRI	D				
LEAD ANA	LYST:	D.	HARTM	AN					
ASSESSME	NT:								
		CALITY	1	REDUN	DANCY	SCREEN	ıs	CII	
		IGHT /FUNC	i	A	В		С	ITE	:M
NASA IOA	[3 ,	/1R] /2R]	[]	P] P]	[P] [P] P]	[] *
COMPARE	[,	/N]	[)	[] [1	[]
RECOMMEN	DATIO	NS: (If di	ffere	nt fro	om NASA	۲)		
	[,	/]	Ţ]	[] - [] ELETE
* CIL RE	TENTI	ON RATI	ONALE	: (If	appli		ADEQUATE	[]

IOA AGREES WITH NASA FMEA.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-19 05-6KA	8 984 -2214-2			[x]									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1984 DRIVER	, HYBRID												
LEAD ANALYST:	D. HAR	TMAN												
ASSESSMENT:					OTI.									
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT														
FLIGH HDW/FU														
NASA [3 /1F IOA [3 /2F	[X] * []													
COMPARE [/N	1	[]	[N]	[]	[N]									
RECOMMENDATIONS	: (If	differe	nt from NA	ASA)										
[3 /3		[]	[]	[]	[D] ADD/DELETE)									
* CIL RETENTION	RATION	ALE: (If	applicab	le) ADEQUATE INADEQUATE	[]									
REMARKS: NASA FMEA CONTA ALONE HAS NO EF	INS MUL	TIPLE FA	ILURES.	THIS DRIVER	OPERATING									

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES)

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT :	ID:	AR	29/88 CS-19 -6KA-	85		-1					SA DA ASEL:]	
SUBSYST MDAC ID ITEM:	EM: :		AR 19 DR	_	н	YBI	RID								-	
LEAD AND	ALYSI	r:	D.	HART	MA.	N										
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NASA IOA	[3 [3	/1R /2R]	[[P P]	! (P]	[P]		[:] *	r
COMPARE	[/N]	[]	(]	[]		[•	•	
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* CIL RE	TENT:	ION F	ITAS	ONALE	:	(I	f ap	pl:	icat	ole)						
REMARKS: IOA AGREI	ES W]	TH N	'ASA	FMEA	•							QUATE QUATE]		

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-19	3 986 -2214-2		NASA DATA: BASELINE NEW	[x]									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1986 DRIVER	, HYBRID												
LEAD ANALYST:	D. HAR	TMAN												
ASSESSMENT:														
CRITICALITY REDUNDANCY SCREENS CIL FLIGHT B C														
CRITICALITY REDUNDANCY SCREENS FLIGHT HDW/FUNC NASA [3/1R] [P] [F] [P] [X]														
NASA [3 /1: IOA [3 /2:	[X] *													
COMPARE [/N	[]	[N]												
RECOMMENDATIONS	: (If	differen	t from NAS	SA)										
[3. /3]	[]	[].	[] ([D] ADD/DELETE)									
* CIL RETENTION	RATION.	ALE: (If	applicabl	e) ADEQUATE INADEQUATE										
REMARKS: NASA FMEA CONT ALONE HAS NO E	AINS MUL	TIPLE FA	LURES. T	HIS DRIVER	OPERATING									
THE DATEED DIE	TO DIF	STEM MANAGREED UPON FERENT IN	TERPRETAT	0/88, NSTS ISSUE (MULT ONS OF NSTS	22206 WAS TIPLE FAILURES) 3 22206.									

THEREFORE, THIS ISSUE REMAINS OPEN.

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ASSESSM	ENT	:																		
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			W/FU				A				В			С				ITE:	M	
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RECOMMEN	IDA]	PIC	ONS:		(If	di	ff	er	ent	f	rc	m l	NASA))						
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* CIL RE	TEN	TI	ON F	TAS	IONA	LE	:	(Ii	f ap	gg.	li	cab		3 D	POT	73.00				•
REMARKS:	ES	WI	TH N	AS	A FM	EA	•						IN	AD	EQU	JATE JATE	[]	
							-													

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ASSESSME	ENT	:																			
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HDW/FUNC A B C														1.	LEM						
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COMPARE	[/N]		[]		[N]	[•]		[N]	
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REMARKS:													I	A NA	D	EQUAT EQUAT	PΕ]		
NASA FMEA ALONE HAS	A C	ON O	TAII EFFI	NS 1 ECT	MULT]	[P]	LE	FA	ILU	R	ES	•	THIS	S	DI	RIVER	OP	ER	ATI	NG	
AT MEETIN DISCUSSED WAS RAISE	iG).	WI I'	TH S T WA E TO	SUBS	SYSTE AGREE FFER	EM ED	MZ UI	ANA PON IN'	GER TH	A:	ON I :	1, רH:	/20/8 E ISS	88 5U:	, E	NSTS (MUL	222 TIPI	20 <i>6</i> LE	5 W FA	AS ILUI	RES)

WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206.

THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-19 05-6KA-	707	4-1]		SA DATA: ASELINE NEW	[x]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1989 DRIVER	, нч	BRID								
LEAD ANALYST:	D. HAR	TMAN									
ASSESSMENT:											
CRITICAL		RE	DUND	ANCY	SCREE	ns	3		CIL	M	
FLIGH HDW/FU											
NASA [3 /1F IOA [3 /2F	R]	[P]	[P]	[P P]	[•
COMPARE [/N]	[1	[1	[]	[]	
RECOMMENDATIONS	: (If	dif	ferer	nt fr	om NA	SA)				
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* CIL RETENTION	RATION	ALE:	(If	app]	licabl			DEQUATE DEQUATE]	
REMARKS: IOA AGREES WITH	NASA F	MEA.									

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	05-6KA-2	0 214-2		NASA DATA: BASELINE NEW	[x]
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1990 DRIVER,	HYBRID			
LEAD ANALYST:	D. HARTN	IAN			
ASSESSMENT:					CIL
CRITICAL	LITY	REDUNDA	NCY SCREE	ens	ITEM
FLIGH HDW/FU	ΙΤ	A	В	С	
NASA [3 /1] IOA [3 /2]		P]	[F] [P]	[P] [P]	[X] *
IOA [3 /2				[]	[N]
COMPARE [/N] [1	נאן	,	
RECOMMENDATIONS	: (If d	different	t from NA	SA)	. n 1
[3 /3	, ,	[]	[]	ri	[D] ADD/DELETE)
* CIL RETENTION	RATIONA	LE: (If	applicabl	le) ADEQUATE INADEQUATE	[] : []
REMARKS: NASA FMEA CONTA ALONE HAS NO E	rrect.				
AT MEETING WIT DISCUSSED. IT WAS RAISED DUE THEREFORE, THI	WAS ACIO	ERENT IN	TERPRETAT	20/88, NSTS ISSUE (MUL IONS OF NST	22206 WAS TIPLE FAILURES) S 22206.

1/29/88 ARCS-1991 05-6KA-2214-1 ARCS 1991 DRIVER, HYBRID D. HARTMAN	NASA BAS	DATA: ELINE [] NEW [X]												
ASSESSMENT: CRITICALITY REDUNDANCY SCREENS														
CRITICALITY REDUNDANCY SCREENS CIL HDW/FUNC A B C														
NC A	В с	ITEM												
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(If different i	from NASA)													
, , ,] []	[] (ADD/DELETE)												
	ADEQUA	TE ()												
	ARCS-1991 O5-6KA-2214-1 ARCS 1991 DRIVER, HYBRID D. HARTMAN ITY REDUNDANCY SCREENS INC A B C [P] [P] [P] [P] [P] [P] [If different from NASA)													

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-19	92			NASA DATA BASELINE NEW									
SUBSYSTEM: MDAC ID: ITEM:	ARCS 1992 DRIVER,	HYBRID												
LEAD ANALYST:	D. HARTI	IAN												
CRITICALITY REDUNDANCY SCREENS CIL														
FLIGHT ITEM HDW/FUNC A B C														
HDW/FUI														
NASA [3 /1R IOA [3 /2R	[P] [P]	[X] *												
COMPARE [/N] []	(N]	[]	[N]								
RECOMMENDATIONS:	(If di	fferent	fro	om NAS	A)									
[3 /3] []	[]	[]	[D] DD/DELETE)								
* CIL RETENTION F	RATIONALE	: (If a	ppli) ADEQUATE INADEQUATE	[]								
NASA FMEA CONTAIN ALONE HAS NO EFFE	S MULTIP	LE FAIL	JRES	. тн	IS DRIVER O	PERATING								

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEN ASSESSMEN NASA FME	4-1						SA D BASEL	INE										
SUBSYSTEM MDAC ID: ITEM:	1 :			AR 19 DR	93	٤,	ну	BRID										
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COMPARE	[/N]		[3	[3	[3		(]	
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REMARKS:	EES	W	ITH	NAS	SA F	ME	A.											

ASSESSMEN ASSESSMEN NASA FMEA	T :	ΙD		ARC	9/8 S-1 6KA	99		4-2	2						ASA DATA BASELINE NEW	[]	
SUBSYSTEM MDAC ID:	f:			ARC 199 DRI		.,	нч	BRI	ID	-									
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			IGH' I/FUI				A				В			С					
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COMPARE	[/N]		[]		[N]	[]	[N]	
RECOMMEN	DAT	'IC	ONS:		(If	d :	if	fer	ent	: 1	fro	т	NASA	(۱					
	[3	/3]		[]		[]	{	•] (2		D /D		ETE)
* CIL RE	TEN	1 T :	ION	RAT	ION	AL.	E:	(I	f a	ap)	pl.	ica			DEQUATE]	
REMARKS: NASA FME ALONE HA	A C	01 01	NȚAI EFF	NS ECT	MUL'	ΓI	PL	E F	FAI	LU	RE	s.	THI	s	DRIVER	OPE	RA	TI	NG

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSM ASSESSM NASA FM	ENT	'I	D:		AR	29/8 CS-: -6K	19	95		-1					ŀ		DA ELI N		[x]	
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COMPARE	[/N]		[]		[]	[]			[)	
RECOMMEN	DA'	ric	ONS	:	(Ίf	di	fí	fer	ent	: f	rc	om 1	NASA)							
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REMARKS: IOA AGRE	ES	WI	TH	N#	\SA	. FM	EA	. •						I	IAV	DEQU	JATE	1	Č]		

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SUBSYST MDAC ID ITEM:	1777	_			ARCS 1996 DRIV											-	
LEAD AN	AL	(S)	ľ:		D. н	ART	MA	N									
ASSESSM	ENI	?:															
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COMPARE	[/N]		[N]		[N]	[N]	-	
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EFFECT.	A C	ON	TAI	NS	MULI	'IP	LΕ	FA	ILU	JR.	ES	•	THIS	F	'AIL	URE ALONE HAS NO	
AT MEETIN DISCUSSED WAS RAISE THEREFORE	ו סו	DUI	E T	OF	Tees	DEN	īm	T3**				1/ HE	/20/8 E ISS TIONS	8 , UE O	NSI (MU F NS	TS 22206 WAS ULTIPLE FAILURES) STS 22206.	

ASSESSMEN' ASSESSMEN' NASA FMEA	r :	LD	CE:	ARCS-	'88 -1997 (A-222	0-1			N2 1	ASA DA BASELI N	TA: NE [EW [x .]]
SUBSYSTEM MDAC ID:	:			ARCS 1997 DRIV	ER, HY	BRID)						
LEAD ANAI	YS	T:		D. H.	ARTMAN	Ī							
ASSESSMEN					ומ	POUNI	DANCY	SCRI	EENS			ΙL	_
(FI	CAI LIGH V/FU	ITY IT INC	A	PDOM	В		C	2	I.	rem	ſ
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COMPARE	[_	/	1	ι]	ί]	[1	[]
RECOMMEN	IDA	TI	ons	: (If dif	fere	ent f	rom N	asa)				_
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* CIL R	ETI	en:	MOIT	RATI	ONALE	: (Ii	f app	lical	ole) II	ADEQU.	ATE ATE	[]
REMARKS NO DIFF	: ER	EN(CES.	•									

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-199 05-6KA-2	98 2220-2		NASA DATA BASELINE NEW	
	ARCS 1998 DRIVER,				
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
CRITICALI FLIGHT		REDUNDAN	CY SCREEN	is	CIL
HDW/FUN		A	В	С	ITEM
NASA [3 /1R IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [/N] [1	и] [N] [N]	[N]
RECOMMENDATIONS:	(If di	fferent f	rom NASA)	
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* CIL RETENTION R	ATIONALE:	: (If app		ADEQUATE NADEQUATE	[]
REMARKS: NASA FMEA CONTAIN: EFFECT.	S MULTIPI	LE FAILUR	ES. THIS	S FAILURE A	ALONE HAS NO

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSMEI ASSESSMEI NASA FME	T	ID	TE:	ARCS	/88 5-1999 5KA-222	0-1				ASA DA BASELI N	NE	[[X]	
SUBSYSTEM MDAC ID:	M:			ARCS 1999 DRIV		BRI	D							
LEAD ANA	LYS	T:		D. I	IARTMAN	ſ								
ASSESSME	NT:													
					RE	EDUN	DANCY	SCR	EENS			CIL	1	
FLIG HDW/F					A		В		C	2				
NASA IOA	[2 2	/2 /2]	[]	[]	[[]		[X]	*
COMPARE	(/)	[]	C]	[]		(]	
RECOMMEN	IDA'	rI:	ons:	: (If dif	fere	ent fr	om N	ASA)					
	RECOMMENDATION				[]	[]	ſ]	(A)	[DD/D] ELE	TE)
* CIL RI	:			RATI	ONALE:	(I1	f appl	icab		ADEQUA ADEQUA		[]	
NO DIFF	ERE	NC	ES.											

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	ARCS-2000	2	NASA DATA: BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 2000 DRIVER, HYBRI	ID.		
LEAD ANALYST:	D. HARTMAN			
ASSESSMENT:				
CRITICAL FLIGH		NDANCY SCRE	ENS	CIL ITEM
HDW/FU		В	С	
NASA [3 /1R IOA [3 /3] [P]] []	[F] []	[P] []	[X] *
COMPARE [/N] [N]	[N]	[N]	[N]
RECOMMENDATIONS:	(If differe	ent from NA	SA)	
[3 /3] []	[]	[] (A)	[D] DD/DELETE)
* CIL RETENTION	RATIONALE: (I	f applicabl	e) ADEQUATE INADEQUATE	
REMARKS: NASA FMEA CONSID OPERATING ALONE	ERS MULTIPLE HAS NO EFFECT	FAILURES.	THIS DRIVER	INADVERTENTLY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT :	ID:	ARC	S-200	1 185-1	L		:	NASA DAT. BASELIN NE]
SUBSYSTE MDAC ID: ITEM:			ARC: 200: DRI		HYBRI	[D					
LEAD ANA	LYST	r:	D. 1	HARTM	AN						
ASSESSME	NT:										
			ITY	I	REDUN	IDANC:	SCR	EENS		CIL	
		FLIGH DW/FU	NC NC	7	1	I	3	(2	ITEM	
NASA IOA	[2	2 /2]]]	[[]	[]	[X] [X]	*
COMPARE	[/]	ſ)	[]	[]	[]	
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* CIL RET	PENT	'ION	RATIC	NALE:	(If	appl	icab.	A	DEQUATE		

NO DIFFERENCES.

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/88 ARCS-200 05-6KA-2			NASA DATA BASELINE NEW	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 2002 DRIVER,	HYBRID			
LEAD ANALYST:	D. HARTM	IAN			
ASSESSMENT:					
CRITICAL: FLIGHT		REDUNDANC	Y SCREENS	3	CIL
HDW/FU	_	A	В	С	ITEM
NASA [3 /1R IOA [3 /3] [P] [F] [P]	[X] *
COMPARE [/N] [и] [и ј [и ј	[N]
RECOMMENDATIONS:	(If di	fferent f	rom NASA)		
[3 /3] [) [] ([D] DD/DELETE)
* CIL RETENTION F	RATIONALE	: (If app	·	ADEQUATE IADEQUATE	[]
NASA FMEA CONSIDE OPERATING ALONE H			RES. THI	S DRIVER	INADVERTENTLY

AT MEETING WITH SUBSYSTEM MANAGER ON 1/20/88, NSTS 22206 WAS DISCUSSED. IT WAS AGREED UPON THAT THE ISSUE (MULTIPLE FAILURES) WAS RAISED DUE TO DIFFERENT INTERPRETATIONS OF NSTS 22206. THEREFORE, THIS ISSUE REMAINS OPEN.

ASSESSME ASSESSME NASA FME	NT :	ID:	ARCS	/88 -2003 KA-21	85-1				ASA I BASEI		[]
SUBSYSTE MDAC ID:	M:		ARCS 2003 DRIV		YBRI	D						
LEAD ANA	LYS'	T:	D. H	ARTMA	N							
ASSESSME	NT:											
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		FLIGH DW/FU		A	•	E	3	C	:			
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* CIL RE		TION	RATIO	NALE:	(If	appl	Licab	1	ADEQU ADEQU		[]
REMARKS:												

NO DIFFERENCES.

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SUBSYSTI MDAC ID: ITEM:			ARCS 2004 FUSE,	12	A													
LEAD ANA	LYST	':	D. HA	RTI	MA	N												
ASSESSME	ENT:																	
	F	ICAL:	Г		RI	EDUN	DANC	Y	SCR	EEN	S				CI IT	L EM		
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REMARKS: IOA AGRE	ES W	TH N	ASA FI	ŒA	. •									,		•	•	

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REMARKS:		W	ודידו	NAS	SA F	ΜE	Ά.													

ASSESSMENT DATE: ASSESSMENT ID: NASA FMEA #:	1/29/8 ARCS-2 05-6KA	006	9-1			NASA I BASEI	DATA: LINE [] NEW [X]	
SUBSYSTEM: MDAC ID: ITEM:	ARCS 2006 FUSE,	2A						
LEAD ANALYST:	D. HAI	RTMAN						
ASSESSMENT:								
CRITICA		RE	DUND	ANCY	SCRE	ENS	CIL ITEM	
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	ARCS 2009 FUSE, 1A									
LEAD ANALYST:	D. HARTMA	N								
ASSESSMENT:										
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ASSESSMENT ASSESSMENT NASA FMEA	r ID:	ARCS-20	13	7-1				NASA BASE		[]	
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LEAD ANALY	ST:	D. HART	MAN										
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REMARKS: IOA AGREES	WITH NA	ASA FMEA	١.							Ĺ		J	

ASSESSMEN'	ASSESSMENT DATE: 1/29/88 ASSESSMENT ID: ARCS-2014 NASA FMEA #: 05-6KA-2009-1											NA B	SA DA' ASELI N	NE	[x]	
SUBSYSTEM MDAC ID:	:		20		2A												
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REMARKS: IOA AGRE	EES V	VITH	NA	SA E	ME	EA.											

ASSESSM ASSESSM NASA FM	ENT :	ID:	AR	CS-20	15	B - 1					ASA I BASE]] 2	x]	
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